

AGRICULTURAL SECTOR PROFILE

April 2024





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A. Introduction

Rocky View County is located in the southern portion of the province of Alberta, just west of the Canadian Rocky Mountains, on the Canadian prairies which power Canada's agricultural output. The County surrounds the City of Calgary, a market of 1.5 million, in a horseshoe-shape to the west, north and east. It is about three and a half hours north of the United States border in the State of Montana.

Table 1: Overview of Rocky View County

Rocky View County	
Elevation:	1,048.43 meters or 3,439.71 feet above sea level. Elevation varies within Rocky View County.
Latitude:	51° 03′ 07″ N
Longitude:	114° 22′ 14″ W
Time Zone:	Mountain Standard Time (MST)
Area:	393,463 hectares or 972,264 acres (approximately 42 townships)
Hours of sunshine per year:	2,405+
Average daily max summer temperature:	21°C
Average daily max winter temperature:	-0.4°C

Alberta is a hub for sustainable food production and environmental stewardship.

Rocky View County has:

- A diverse and skilled agricultural business community.
- A varied growing season and soil types which support numerous agricultural production types.
- Access to a significant and affluent population.
- A well-developed infrastructure base including a regional transportation system and irrigation infrastructure.
- A favourable tax structure with a very competitive non-residential property tax rate and no municipal business tax.



B. Industry Trends

Population fuels demand for food and the global population is expected to reach 8.5 billion by 2030 and 9.7 billion by 2050, up 31%. Global demand for protein (meat, aquaculture, plant sources) is increasing due to rising middle class (incomes) in emerging markets particularly in Asia (China and India). Farmed seafood (aquaculture) has recently surpassed the wild fish catch.¹ All these farms will require feed and the Canadian prairies will be able to provide a cheap supply of food.

B.1 Plant based Proteins

New trends are emerging in agriculture and agri-processing. Plant-based protein (e.g. peas, lentils, pulses) is in high demand and is the fastest growing food processing segment in Canadian agriculture right now. This is being driven by clean labels and allergen concerns, changing consumer preferences, and a shortage of plant protein material – especially in Europe and China, Southeast Asia.²

According to the National Research Council of Canada plant-based protein is expected to contribute more than \$4.5 billion dollars to Canada's GDP growth from primary sources like pulses, soybean, canola and hemp over the next 10 years.³

Plant-based proteins are supported through the Protein Industry Supercluster - one of Canada's Innovation Superclusters Initiative. Canada is the world's largest exporter of pulses, exporting 80% of the pulses grown.⁴ Pulses are grown mainly in Saskatchewan, but production is rising in parts of Alberta, Manitoba and British Columbia.

The Canadian pulse industry has set a goal to have 25% of pulse production marketed into new uses by 2025. They are working to achieve this by creating new demand for pulses and for pulse ingredients in non-traditional markets including into retail food products and in the foodservice industry.

B.2 Generation Y and Z

In February 2024, Statistics Canada officially reported that millennials (those born between 1981 and 1996), also known as Generation Y, are now Canada's largest age cohort and have supplanted baby boomers as the country's largest demographic.

Alberta's population has the highest proportion of millennials. Millennial values will influence the future of the food industry:⁵

- Millennials are more racially and ethnically diverse than prior generations. They have a preference for ethnically diverse food and snacks.
- Millennials rely on friends and family as their primary source of information about food.
- Millennials are more likely than baby boomers to replace meals with snacks.
- Millennials advocate for clean labelling, better sourcing of ingredients and healthier options.

¹ Ritchie, Hannah. "The world now produces more seafood from fish farms than wild catch." Our World In Data. 2019. <u>https://ourworldindata.org/rise-of-aquaculture</u>

² Hursh, Kevin. "Plant Proteins: a value-added opportunity." FCC AgriSuccess. September 2017.

³ <u>https://nrc.canada.ca/en/research-development/research-collaboration/programs/sustainable-protein-production-program</u> ⁴ <u>https://pulsecanada.com/industry/market-access</u>

⁵ Charlebois, Sylvain. "Millennials' values will influence future of food industry." March 1, 2024.



Generation Z (Gen Z) makes up 30% of the world's population (and ~18% of Canada's population). Gen Z impacts on the food industry include:

- Food represents who Gen Z are. They take a picture of it and post it to their social media.
 According to AgVision Media, an agricultural insights and consulting company, Gen Z spends more money on food than they do clothes.⁶
- Gen Z's heightened social and environmental awareness will push the industry even further towards transparency, sustainability and innovation. They are more likely to support local and small-scale producers who align with their values of sustainability and community.
- Their preference for alternative protein sources will likely accelerate the shift towards to sustainable food production.
- Their emphasis on authenticity and experiences may lead to a rise in experiential dining and unique food offerings.

B.3 Changing Consumer Preferences

The way people buy food is changing. Today's buyers are interested in the locality and origin of the food they purchase. Food and drink that is both sourced and supplied locally and backed by stories on the roots of the ingredients that make up the finished product are leading the way for premium produce.

Additionally, the sales of ethical and sustainable produce have increased. Consumers value fresh, quality product and taste.

People are increasingly shopping for food online and using food delivery services such as vegetable boxes and meal kits. Many consumers are buying food from local food producers. The COVID-19 pandemic changed consumer attitudes towards food in unexpected ways. Locally produced food and direct farm-to-consumer shopping increased during the pandemic as a result of consumers wanting to avoid standing in long queues, trade issues such as international transport restrictions, and supply chain issues.

Health, wellness and functionality are increasingly sought-after by conscious consumers who want their food and drink to contain nutritional and health-focused properties. Today's alcohol consumers are moving away from mainstream brands toward higher end craft and super-premium offerings.

B.4 Farm Direct-to-Consumer Sales

Selling direct allows producers to put a "face" on who is growing the product. Consumers do not necessarily get this from traditional retail food outlets. Additionally, farm direct marketing provides a direct link between urban consumers and rural food producers; this also helps to support sustainable communities.

Analysis of Agriculture Sector:

⁶ https://brandpointspluscanada.com/big-trends-time-to-mine-the-untapped-potential-in-gen-z/

Data from the 2021 Census of Agriculture shows that the number and proportion of farms reporting direct sales have increased, compared with the 2016 Census for both unprocessed agricultural products and value-added products. Furthermore:

- Farms in smaller revenue classes (\$0 to \$9999 and \$10,000 to \$24,999) are more likely to use direct sales to consumer.
- Fruit and vegetable farms have the highest rates of direct sales among farm types. •
- Farms reporting organic products are more likely to use direct sales.
- Farm operators in the 35 to 54 years age group work on farms that have the highest rate of direct sales.
- Farms managed by female operators are more likely than farms managed exclusively by male operators to report direct sales.⁷

C. Current state of Rocky View County's product categories

Rocky View County, along with its neighbours, including the city of Calgary, are home to a critical mass of companies. Additionally, an agreement has been signed to develop a world class agri-food corridor between Calgary and Olds. The "Calgary-Olds Smart Agri-Food Corridor" is meant to leverage Calgary's global corporate presence and distribution hub with the College's Smart Farm applied research and integrated learning facility. Through the corridor, companies and entrepreneurs have access to a worldclass agribusiness environment that supports the development and scaling of new technologies designed to drive innovation in smart agri-food production.

Agri-Processors in Rocky View County:

- Bragg Creek Distillers •
- Canada Malting Co. Ltd.
- Crystal Rill Trout
- Harmony Beef Co. Ltd.
- Highline Mushrooms
- HydraGreen Produce
- Long Run Ranch Beef
- Pleasant View U Pick Berries

- Prairie Berry
- Sage Creek Permaculture
- Souto Farms
- Sweet Life Saskatoons
- **TK Ranch Natural Meats**
- Your Local Ranch

Other Key Organizations in the Agriculture Supply Chain in Rocky View County:

- Alta Genetics
- Barrett Veterinary Practice
- Bova-Tech Ltd. (BTL) •
- Brandt Agriculture
- Century Downs Racetrack and Casino
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant •
- Nutrien Ag Solutions

- Parish & Heimbecker Ltd.
- **Remuda Building**
- **Rocky Mountain Equipment**
- Thorlakson Feedyards Inc.
- Tractorland
- Viterra
- Wenstrom Equipment

- Winters Turkey
 - •

⁷ St. Pierre, Michelle. "Canada's farms are adjusting the ways they sell their products to consumers." Statistics Canada. Release date: February 9, 2023. Catalogue no. 96-325-X. ISSN 2817-0202.



Ranching and cropping activities have been the dominant agricultural land uses over the past several years in Rocky View County.

Rocky View County's three most noteworthy crops by amount of land (2021) are:

- Canola (134,094 acres)
- Barley (131,923 acres)
- Wheat (123,864 acres)

followed by:

- Alfalfa and Alfalfa Mixtures (56,036 acres)
- All Other Tame Hay and Fodder (34,009 acres)
- Dry Field Peas (13,965 acres)

C.1. Grains and Oilseeds

Grain and oilseed milling is the second-largest component of Alberta's food manufacturing sales, valued at C\$5.5 billion in 2022.⁸

Appendix A includes the Annual Crop Inventory Map for Rocky View County.

C.1.a Canola

Rocky View County Production:9

- Canola: 134,094 acres, which is approximately 2% of provincial acres.
- Canola is grown at 359 farms.

Export Markets:

- Canada exports approximately 17 million tonnes of canola annually. Alberta produces 30% of Canada's canola.
- Canadian exports of canola seed goes to: China, Japan, Mexico, Pakistan, and the United Arab Emirates. China has long been the largest importer of Canadian canola.

Sample of Organizations in Rocky View County:

- Brandt Agriculture
- CN Rail
- CPKS
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant
- Nutrien Ag Solutions

- Parish & Heimbecker Ltd.
 - Rocky Mountain Equipment
- Tractorland
- Viterra
- Wenstrom Equipment

 ⁸ Government of Alberta. Ministry of Agriculture and Irrigation. "Alberta Agriculture." September 2023. <u>https://open.alberta.ca/dataset/6c886ec7-c329-4fa3-9c12-847037e02c73/resource/25a31dca-c30a-49e3-8a7b-cca8e13ad91f/download/agi-alberta-agriculture-2023.pdf</u>
 ⁹ 2021 Census of Agriculture.

Product Needs:

- Rocky View County and the province of Alberta is an ideal place to grow crops like canola because it has an ideal mix of warm days and cool nights.
- Western Irrigation District (WID) provides access to a dependable commercial and residential water source. Lands in the east central and south east regions of the county have access to this irrigation infrastructure. In 2022, 18,867 acres of canola were under irrigation within the WID.¹⁰

Research & Development and Producer Supports:	
Alberta Canola	funds research projects that help farmers succeed, whether it's finding better ways to grow canola, investigating new uses and health benefits for canola oil, or promoting the use of canola meal in livestock feed rations.
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.
Field Crop Development Centre (FCDC)	located in Olds, the FCDC is recognized as a world-class research facility.
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.
Food Science and Technology Centre	in Brooks conducts funded, applied research to develop value-added food/feed products from local crops.
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.

Table 2: Research & Development and Producer Supports related to Canola Production and Processing

Potential Opportunities within Rocky View County:

 Oilseed milling/canola crushing. Canola seed is purchased from growers, then cleaned, graded and crushed to extract the oil. Canola meal, a byproduct, is used as a protein feed supplement for livestock. The meal is toasted, cooled, dried and granulated. It is sold as pellets or mash and is particularly popular among dairy farmers as it has been proven to increase milk production by one litre per cow per day.¹¹

¹⁰ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. https://open.alberta.ca/publications/3295832

¹¹ https://hellocanola.ca/

- **Food production**. Canola oil is refined and processed into cooking oil, margarine, salad oils, and other. Canola oil contains half the saturated fat of olive oil and has the most plant-based omega-3 fats of all common cooking oils.
- Biofuel production. Canola is used in biofuel production because it's a low-carbon, sustainable and renewable resource with an abundant supply. Canola-based biofuel can be used by passenger vehicles and trucks, as well as off-road equipment used in mining, forestry, construction, agriculture and marine industries.¹² Canola is an efficient source of biodiesel as it produces more oil per unit of seed than other oilseeds.
- **Other industrial uses**. Canola oil can be used in a variety of industrial applications to make lubricants, oils, fuel, soaps, paints, plastics, cosmetics and inks.

C.1.b Wheat

Rocky View County Production:¹³

- Wheat: 123,864 acres, which is approximately 2% of provincial acres.
- Spring wheat (excluding durum): 114,877 acres, which is approximately 2% of provincial acres.
- Wheat is grown 355 farms the second most farms behind canola.

Export Markets:

- Alberta produced 33% of Canadian wheat. The province grew the second highest number of acres of spring wheat.
- Alberta exports wheat to 70 countries worldwide, averaging nearly 7 million tonnes per year. The United States is a top importer of wheat and durum.
- Alberta's wheat is mainly going through west coast ports to reach Asian destinations (South Korea, Japan, Bangladesh, and Indonesia). Durum is just as likely to go through an east coast port to reach Europe and the Middle East.¹⁴

Canadian wheat has a worldwide reputation for uniformity and consistency.

Sample of Organizations in Rocky View County:

- Brandt Agriculture
- CN Rail
- CPKS
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant
- Nutrien Ag Solutions

- Parish & Heimbecker Ltd.
- Rocky Mountain Equipment
- Tractorland
- Viterra
- Wenstrom Equipment

¹² <u>https://www.canolacouncil.org/biofuels/</u>

¹³ 2021 Census of Agriculture.

¹⁴ <u>https://www.alberta.ca/benchmark-of-current-grain-flows-of-canadian-wheat-board-</u> grains#:~:text=Wheat%20and%20barley%20are%20mainly,Europe%20and%20the%20Middle%20East



Product Needs:

- Rocky View County is in the main production zone for wheat growing on the prairies.¹⁵
- WID provides access to a dependable commercial and residential water source. Lands in the east central and south east regions of the county have access to this irrigation infrastructure. In 2022, 9,823 acres of hard spring wheat, 1,451 acres of Canada Prairie Spring (CPS) wheat, 2,324 acres of soft wheat, and 893 acres of durum wheat were under irrigation within the WID.¹⁶

Research & Development and Producer Supports:		
Alberta Grains	is a farmer-directed, not-for-profit organization that represents the interests of and serves as the single voice for all of Alberta's wheat and barley producers. They support research projects that aim to improve crop management, reduce input costs and environmental impact, and increase yield and grain quality.	
Canadian International Grains Institute (Cigi)	is a not-for profit institute providing pre-market and in-market technical support for the Canadian grain sector.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	in Olds is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Table 3: Research & Development and Producer Supports related to Wheat Production and Processing

https://open.alberta.ca/publications/3295832

 ¹⁵ <u>https://open.alberta.ca/dataset/2d548ade-7a0c-42a8-bd41-ab965082e24f/resource/e6c0c20f-3987-45ce-98e4-4aac0eb2b0c8/download/af-western-canadian-grain-catchment-benchmark-of-current-grain-flows.pdf
 ¹⁶ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023.
</u>

Potential Opportunities within Rocky View County:

- Small scale or specialty milling. Wheat is transported to a mill where it is tested, cleaned and milled into flour. In Alberta, there are two major millers: ADM Milling Co. in Calgary, and the Lethbridge Parrish & Heimbecker Flour Mill.
- **Food production**. Milled flour can be sold as flour or used to create more products like bread or baked goods, fresh or dried pasta (durum wheat), baking mixes and more.

C.1.c Barley

Rocky View County Production:¹⁷

- Barley: 131,923 acres, which is approximately 3% of provincial acres.
- Barley is grown on 316 farms.

Export Markets:

- Canada is one of the world's largest barley suppliers, producing about eight million tonnes annually. Alberta is home to over half of Canada's annual barley production, yielding an average of over 4.5 million tonnes of barley per year.
- Alberta's barley exports are mostly used as feed for livestock, and malt for brewing and distilling.
- Alberta's barley is mainly going through west coast ports to reach Asian destinations.
- The US is one of the top importers of Alberta barley along with Japan and China. The middle east, led by Saudi Arabia, also imports Alberta barley.
- Each year a quarter of all barley grown in Canada is selected for malt, with the remainder used for feed. Canada uses about 350,000 tonnes of malt domestically while exporting approximately 800,000 tonnes of processed malt and one million tonnes of malting barley annually.¹⁸

Barley grown in Alberta is recognized internationally for its superior product qualities.

Sample of Organizations in Rocky View County:

- Bragg Creek Distillers
- Brandt Agriculture
- Canada Malting Co. Ltd.
- CN Rail
- CPKS
- G3 Canada
- K.I.B.A. Beiseker Seed Cleaning Plant
- Nutrien Ag Solutions
- Parish & Heimbecker Ltd.
- Rocky Mountain Equipment
- Tractorland
- Viterra
- Wenstrom Equipment

https://barleyresearch.ca/wp-content/uploads/2021/08/CBRC_NatBarleyResearchStrategy-v4.1.pdf

¹⁷ 2021 Census of Agriculture.

¹⁸ Canadian Barley Research Coalition. "National Barley Research Strategy." Prepared by: Gina Feist (Brewing and Malting Barley Research Institute) and Kara Barnes (Barley Council of Canada)

Product Needs:

- Barley crops thrive in southern Alberta's long summer days and cool nights.
- WID provides access to a dependable commercial and residential water source. Lands in the east central and south east regions of the county have access to this irrigation infrastructure. In 2022, 8,643 acres of barley and 3,299 acres of malt barley were under irrigation within the WID.¹⁹

Research & Development and Producer Supports:	
Alberta Grains	is a farmer-directed, not-for-profit organization that represents the interests of and serves as the single voice for all of Alberta's wheat and barley producers. They support research projects that aim to improve crop management, reduce input costs and environmental impact, and increase yield and grain quality.
Canadian International Grains Institute (Cigi)	is a not-for profit institute providing pre-market and in-market technical support for the Canadian grain sector.
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.
Field Crop Development Centre (FCDC)	in Olds is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.
Food Science and Technology Centre	in Brooks conducts funded, applied research to develop value-added food/feed products from local crops.
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.

Table 4: Research & Development and Producer Supports related to Barley Production and Processing

¹⁹ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. <u>https://open.alberta.ca/publications/3295832</u>

Potential Opportunities within Rocky View County:

- **Livestock feed**. Cattle consume the majority of barley, followed by poultry and swine. The pet food industry also uses barley as a healthy grain additive.
- **Malt processing**. Western Canada has ideal growing conditions for malting barley, which has resulted in a reputation for very high quality.
- **Food Barley**. In North America, there is renewed interest in barley for its nutritional qualities: In 2012 Health Canada awarded barley with an official health claim linking the consumption of barley beta-glucan to a reduction in blood cholesterol. Food barley can appeal to consumers from a whole food perspective, as it is locally grown and there are no genetically modified varieties.²⁰
- **Industrial Uses.** Industrial applications for barley include bioethanol, paper and wood composites, cosmetics, packaging material, natural emulsifiers, and pharmaceuticals.²¹

C.1.d Forage Crops: Alfalfa and Alfalfa Mixtures

Rocky View County Production:²²

- Alfalfa Mixtures: 56,036 acres, which is about 2% of Alberta's acres.
- All Other Tame Hay and Fodder: 34,009 acres, which is about 2% of Alberta's acres.

Product Needs:

- Alfalfa is a widely used source of high protein roughage for livestock in pasture and hay mixes. Alfalfa is recognized as a high-quality feed with a lot of versatility and is used extensively in the dairy industry. It can be harvested and fed as greenchop, hay, cubes, haylage, or silage, or it can be grazed.
- Alfalfa hay is widely grown in Western Canada, as Western Canada has ideal growing conditions for this nutrient rich legume. Furthermore, the foothills of the Canadian Rockies provide ideal climatic conditions - the region's higher altitudes, the long warm days and cool nights, the rich soil, clean air and pristine setting make ideal growing conditions for hay and forage.²³
- WID provides access to a dependable commercial and residential water source. Lands in the east central and south east regions of the county have access to this irrigation infrastructure. In 2022, 10,739 acres of alfalfa, 1.187 acres of alfalfa hay, 2,229 acres of grass hay, and 1,851 acres of timothy hay were under irrigation within the WID.²⁴

²⁰ Canadian Barley Research Coalition. "National Barley Research Strategy." Prepared by: Gina Feist (Brewing and Malting Barley Research Institute) and Kara Barnes (Barley Council of Canada)

https://barleyresearch.ca/wp-content/uploads/2021/08/CBRC_NatBarleyResearchStrategy-v4.1.pdf ²¹ lbid.

²² 2021 Census of Agriculture.

²³ <u>https://www.barr-ag.com/</u>

²⁴ Alberta Agriculture and Irrigation. "Alberta Irrigation Information 2022." June 28, 2023. <u>https://open.alberta.ca/publications/3295832</u>

Export Markets:

- Alfalfa hay typically goes through alfalfa dehydration and hay compaction in preparation for export. Most of the processing occurs in the Canadian Prairies. Products include dehydrated alfalfa meal and pellets, sun-cured alfalfa pellets, alfalfa cubes and compressed bales of alfalfa hay. These products are exported to: Japan, Korea, China, United States, United Kingdom, Ireland, United Arab Emirates, Taiwan, and other Middle Eastern countries.²⁵
- Canada is also a major exporter of alfalfa seed, with alfalfa seed produced almost entirely in the prairie provinces. The bulk of exports go primarily to the US (50%) followed by China (35%). The remainder of Canadian exports are spread throughout the world.²⁶

Research & Development and Producer Supports:		
Alberta Alfalfa Seed Commission (ASCA)	is a farmer directed, organization focused on promoting activities that enhance the viability of alfalfa seed and leafcutter bee industries in Alberta. It has a mandate to fund and partner on research which will enhance all aspects of the alfalfa seed and leafcutter bee industry in Alberta.	
Canadian Cocoon Testing Center (CCTC)	located in Brooks, is the national testing centre for alfalfa leafcutter bee cocoons.	
Canadian Forage and Grassland Association	is the national voice for all sectors of the forage and grassland industry. Its main role is to uphold the robust forage industry and realize the potential of the domestic and export forage market.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	in Olds is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Table 5: Research & Development and Producer Supports related to Forage Crop Production andProcessing

²⁵ <u>https://www.barr-ag.com/</u>

²⁶ <u>https://www.alberta.ca/alfalfa-seed-marketing-in-canada</u>

Potential Opportunities within Rocky View County:

- **Compressed Hay.** "Compressed hay" refers to various forage products compressed into tightly bound, high density, low moisture bales. The Canadian compressed hay industry was first established in the early 1980s. Most of the industry is located in Alberta.
- **Nutritional supplements.** Alfalfa can be used for human consumption and as a nutritional supplement.
- Industrial Purposes. The potential exists for alfalfa to be used for industrial purposes, providing farmers with new high-value products and adding to their profit margin. Although the technology to develop alfalfa into important value-added goods like biodegradable plastics and improved textiles is still relatively nascent.²⁷

C.1.e Dry Field Peas

Rocky View County Production:²⁸

• Dry Field Peas: 13,965 acres.

Export Markets:

In 2019, Alberta's pulse growers grew 1,685,900 metric tonnes of field peas on 1,743,300 acres with farm cash receipts of \$387 Million. Alberta dry pea exports were valued at \$508 Million with China accounting for the majority of exports at \$294 Million, Bangladesh at \$105 Million, followed by India (\$30 Million), Cuba (\$20 Million), United States (\$15 Million), Nepal (\$10 Million), as well as Colombia, Pakistan, Taiwan, Philippines and other countries.²⁹

Product Needs:

- Field peas are a cool season annual plant grown adapted to cool temperate zones such as Western Canada. Optimum temperatures are 23°C daytime and 10°C evening.
- Field pea is the most widely grown pulse crop in Alberta and is grown in Southern Alberta, Central Alberta, or the Peace River Region.³⁰
- Field peas grow well in the black and thin black soil zones in Rocky View County.

²⁹ <u>https://albertapulse.com/growing-peas/</u>

³⁰ Ibid.

 ²⁷ University of California. Division of Agriculture and Natural Resources. "Alfalfa for Industrial and Other Uses." Publication
 8305. July 2008. <u>https://alfalfa.ucdavis.edu/sites/g/files/dgvnsk12586/files/media/documents/UCAlfalfa8305Industrial-reg.pdf</u>
 ²⁸ 2021 Census of Agriculture.

Table 6: Research & Development and Producer Supports related to Dry Field Pea Production andProcessing

Research & Development and Producer Supports:		
Alberta Pulse Growers Commission	based in Leduc, Alberta Pulse Growers Commission is a not-for-profit organization that supports over 5,400 Alberta farmers who grow pulses, including dried peas, beans, chickpeas, lentils, soybeans and faba beans.	
Protein Industries Canada (PIC)	is an industry-led, not-for-profit organization created to position Canada as a global source of high-quality plant protein and plant-based co-products.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Field Crop Development Centre (FCDC)	in Olds is recognized as a world-class research facility that is focusing on producing new barley and triticale varieties for Alberta and western Canada.	
Lethbridge Research and Development Centre	leads research on crop production (agronomy, breeding, genetics, pathology) and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.	
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Food Science and Technology Centre	in Brooks conducts funded, applied research to develop value-added food/feed products from local crops.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Potential Opportunities within Rocky View County:

• **Fractionation**. With the growing demand for their pea protein, there is an increasing need to expand pea processing capacity such as dry fractionation or protein isolate manufacturing in order to further develop commercial-ready pulse ingredients for the Canadian food sector.



C.2. Livestock

C.2.a Cattle

Rocky View County Production:³¹

- Number of Cattle: 126,545, which is about 2% of province's cattle inventory.
 - Calves 47,291 3% of province's cattle inventory
 - Steers 9,745 1% of province's cattle inventory
 - Heifers 23,622 3% of province's cattle inventory
 - Heifers for slaughter or feeding 13,398
 - Heifers for beef herd replacement 9,756
 - Heifers for dairy herd replacement 468
 - Cows 42,041 the majority of which are beef

Bulls 3,846

- Cattle production occurs at 548 farms in Rocky View County, which is about 3% of the province's cattle farms. Over one-third (34.8%) of Rocky View County's 1,142 farms are primarily engaged in beef cattle ranching and farming.
- Cattle production occurs primarily on western side of the county.³²

Export Markets:

- In 2020, Canada exported 47.4% of total beef and cattle produced in Canada.³³
- Alberta led the nation in cattle and calf inventory, accounting for more than 43% of Canada's total.³⁴ As Canada's leading beef-producing province, Alberta is also a significant exporter of beef and live cattle.
- Most of Canada's beef is processed in Alberta.
- Most of Canada's beef exports go to the United States (over 70%), followed by Japan, Mexico, Hong Kong/Macau and China.³⁵

Sample of Organizations in Rocky View County:

- Alta Genetics
- Barrett Veterinary Practice
- Bova-Tech Ltd. (BTL)
- Harmony Beef Co. Ltd.
- Long Run Ranch Beef
- Nagel & Company Veterinary Services
- Sage Creek Permaculture
- Souto Farms
- TK Ranch Natural Meats
- Thorlakson Feedyards Inc.
- Your Local Ranch

³¹ 2021 Census of Agriculture.

³² Rocky View County. "Agriculture Master Plan." 2009. P. 40.

³³ Canada Beef. "Fast Fact Sheet." 2021. https://canadabeef.ca/wp-content/uploads/2021/09/Canada-Beef-Fast-Fact-Sheet-2021.pdf

³⁴ 2021 Census of Agriculture.

³⁵ Canada Beef. "Fast Fact Sheet." 2021. https://canadabeef.ca/wp-content/uploads/2021/09/Canada-Beef-Fast-Fact-Sheet-2021.pdf

Needs of the product:

- Alberta's beef industry benefits from province's favorable climate and geography. The province has an arid climate, which is ideal for raising cattle. The dry climate reduces the risk of disease.
- Alberta has vast expanses of natural grasslands that provide excellent grazing opportunities for cattle. These grasslands are rich in nutrients and are an essential part of the cattle's diet, contributing to the overall quality of the beef.³⁶
- Cattle raised in Alberta's spacious pastures have access to clean water, fresh air and natural grazing areas.
- Alberta's cattle feed is also a critical factor in the superior taste and quality of its beef. While
 grass and forage are the foundation of the cow-calf industry, feed for finishing cattle in Alberta
 is grain-based. The ration typically contains a high percentage of barley grain, augmented by
 barley silage. These grain-based rations provide superior quality products with exceptional
 flavor and texture.



³⁶ <u>https://darcysmeats.ca/blogs/blog/what-makes-alberta-beef-unique</u>



Research & Development and Producer Supports:	
Alberta Beef Producers	works on behalf of more than 18,000 beef cattle producers to maintain the Canadian beef advantage: outstanding genetics; robust food safety, beef grading, animal health and environmental standards; efficient production practices; high standards of animal care; responsible environmental stewardship; and world-class processing facilities that consistently produce safe, nutritious, high quality, and great tasting beef.
Canadian Cattle Association (CCA)	is the national voice of Canada's 60,000 beef farms and feedlots. It was founded by producers and led by a producer-elected board. The CCA works to address issues that concern Canada's beef producers.
Alberta Cattle Feeders' Association	is an advocacy organization representing the interests of members on a broad range of government policies and economic issues impacting the competitiveness of the production of beef and beef products in Alberta.
Canadian Beef Centre of Excellence	is located in Calgary. It is a globally recognized leader of Canadian Beef and Veal innovation, training, education and culinary expertise.
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.
Lethbridge Research and Development Centre	leads research on beef cattle production systems (health and welfare, food safety, microbiology); crop production and sustainable production systems under dryland and irrigated conditions associated with farming in a semi-arid climate.
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.

Table 7: Research & Development and Producer Supports related to Cattle Production and Processing

Potential Opportunities within Rocky View County:

- Meat and specialty meat processing.
- Snack foods e.g. beef jerky.
- Direct sales.





C.2.b Pigs

Rocky View County Production:³⁷

• Number of Pigs: 23,190.

Export Markets:

- Canada is among the world's top five pork exporters with products being shipped to approximately 30 countries. Alberta, like most of Canada, exports approximately 70% of its pork production.
- The major markets for Alberta pork sales (fresh, frozen, chilled, including offal) in 2021 included Japan, United States, Mexico, South Korea, China and the Philippines. These countries account for nearly 96% of the total value of Alberta pork exports (\$515 million).³⁸

Needs of the product:

- Pork production in Alberta benefits from its environment, superior swine genetics, and quality feed.
- Alberta's wide land mass and lower hog population, pig farms are widely distributed, leading to better disease control and herd health status.
- Alberta is Canada's largest feed grain producer with abundant supplies of barley, wheat, canola and clean pure water. This natural advantage makes Alberta a prime location for hog production, with high-quality barley making up the largest part of the feed rations used for hogs raised in the province. Alberta's grain-fed pork is famous for its tenderness and firm white fat, leading to a better flavor and texture experience.³⁹

³⁷ 2001 Census of Agriculture.

³⁸ <u>https://www.alberta.ca/agri-news-global-appetite-for-pork</u>

³⁹ Government of Alberta. Ministry of Agriculture and Irrigation. "Alberta Pork." September 2023. <u>https://open.alberta.ca/dataset/18791042-4f65-4ee4-960c-affcbddbb4fd/resource/4f075c15-cb55-4e06-8143-7f91c9c73679/download/agi-alberta-pork-2023.pdf</u>



Research & Developm	Research & Development and Producer Supports:	
Alberta Pork	is a non-profit organization representing the province's registered hog producers before government, industry partners, media, the general public and other interest groups.	
Lacombe Research Facility	is Agriculture and Agri Food Canada's meat research centre for beef and pork. They have a farrow to finish unit stocked with Genesus Genetics. They undertake research on farm in on site abattoir and with various meat quality measuring protocols with world-class equipment. Genesus, the only Canadian-owned swine genetic company, is collaborating on several projects with Lacombe with the goal to produce ever-better pork.	
Lacombe Research and Development Centre	an Agriculture and Agri-Food Canada institution conducts research on two major strategic activities, related to livestock and meat production, and to crop sciences.	
Swine Research Technology Centre (SRTC)	located at the University of Alberta, SRTC research programs center on nutrition and metabolism, feeds and feedstuff utilization, and reproduction and breeding herd management.	
Food Processing Development Centre	in Leduc features the Agrivalue Processing Business Incubator which provides infrastructure and services to support food processing ventures in commercializing products and growing their business.	
Alberta Food Processors Association	based in Calgary, the AFPA is a non-profit organization representing all segments of the \$15 billion food and beverage industry including growers, processors, retailers, foodservice buyers and suppliers.	

Table 8: Research & Development and Producer Supports related to Pig Production and Processing

Potential Opportunities within Rocky View County:

- Meat and specialty meat processing.
- Snack foods.
- Direct sales.

C.2.c Other Livestock

Rocky View County Production:40

- Number of Hens and Chickens: 186,690, approximately 1% of the provincial inventory.
 Egg Production Number of Table Eggs: 8,984,068 (dozens), which is approximately 13% of the provincial inventory, and 4% of the province's farms.
- Number of Sheep: 4,354, approximately 2% of the provincial inventory, and 4% of the province's farms.
- Number of Horses and Ponies: 2,159 approximately 2% of the provincial inventory, and 4% of the province's farms.



C.3. Controlled Environment Agriculture

Controlled Environment Agriculture (CEA) is an indoor technology-based production system where crops are grown under a modified and highly conditioned environment. The greenhouse sector and its derivatives such as vertical farming and hydroculture are the most common forms of CEA used in horticultural production. The Canadian greenhouse industry is the largest and fastest growing segment of indoor farming.

Rocky View County Production:⁴¹

- Greenhouses: 20 approximately 4.6% of provincial greenhouse operations.
 Fruits and vegetables: 15
- Square footage: not available.

Export Markets:

- Greenhouse and CEA production is growing primarily to address homegrown produce shortages.
 Canada's fresh produce market (fruits and vegetables) is highly dependent on imports from the US, Mexico and other international markets.
- Alberta's exports of food crops grown under cover in 2019 were \$4.7 million. Imports were \$26.9 million. Exports of nursery and floriculture products were \$122,269; import were \$10,777,493.⁴²

Sample of Organizations in Rocky View County:

- Badger Ridge Farm Greenhouse
- HydraGreen Produce

Highline Mushrooms

Product Needs:

- Alberta's relatively warm climate, consistent sunlight, low-cost natural gas, availability of water and reasonably priced land makes it an ideal location for greenhouses. The present size of Alberta's greenhouse crops industry is estimated to be 404 acres, 164 hectares, 17.62 million square feet, or 1.64 million square metres.⁴³
- Crops grown using Controlled Environment Agriculture need up to 95% less water than traditional crops because none is wasted.
- Affordable land/site: One of the main goals is to compete with lower-priced field-grown crops.
- **Zoning.** One of the most common barriers to urban agriculture and vertical farming is zoning restrictions. It makes the most sense to build facilities on agricultural land because it's cheaper, but not all jurisdictions recognize indoor farming as "farming" so getting approval to put a facility on land zoned for agriculture can be complicated.

⁴¹ 2001 Census of Agriculture.

⁴² Government of Alberta. "Profile of the Greenhouse Industry in Alberta 2019." Prepared by Emmanuel Anum Laate and Dr. Mirza Consultants Inc. September 2020.

https://open.alberta.ca/dataset/f3bed9fa-0896-41c1-b4d4-f33717545e47/resource/dff6c633-02b9-4b3e-9903aa466c238d69/download/af-ecb-profile-greenhouse-industry-alberta-2019-2020-08.pdf



- Steep startup costs: Because startup costs are steep, most startups cannot afford to wait for zoning regulations to be decided.
- High energy costs and costs of the facility itself means the operation has reach a significant scale before it becomes economically viable.
- As operations find success, they get larger, so it makes sense to build them near a distribution hub to cut down on transport.
- CEA production is labour intensive, requiring workers for a range of critical production tasks including propagation, planting, movement and management of plants, cleaning, harvesting, pest management, pruning, sorting and packaging. The agricultural sector in Canada already faces chronic labour shortages and has difficulty attracting and retaining workers. More specifically, the greenhouse industry has the largest labour gaps, with positions reportedly the toughest to fill, accounting for 59% of the industry workforce and 90% of the current labour gap.44
- A vertical farmer can produce a much larger quantity of produce. And those crops can be grown all year round. Less seasonal work.

Potential Opportunities within Rocky View County:

- There is a strong case for Canada to invest in opportunities and supports to enable domestic and local production in fresh produce to meet consumer demand gaps and put downward pressure on potential pricing and access issues.⁴⁵
- Fast-food service providers have been "rapidly switching" much of their produce supply to ٠ greenhouses, because of inconsistencies in the outdoor farming supply chain that exist. Crops grown using Controlled Environment Agriculture are more reliable, as they're not at the mercy of extremes of temperature and rainfall. There are no pests to eat the crops, and no bacteria or diseases to damage them.
- In addition to selling produce from CEA, there is an opportunity to sell the technology.



Highline Mushrooms' farm in Rocky View County is the organization's most technologically advanced farm in Canada. They are able to purchase their composting straw from local farmers.

⁴⁴ <u>https://ised-isde.canada.ca/site/innovative-solutions-canada/en/enhancing-automation-controlled-environment-agriculture-</u> farming

D. Rocky View County's Strategic Advantages

D.1. Concentration of primary products and producers

Ranching and cropping activities have been the dominant agricultural land uses over the past several years in Rocky View County. The County holds about 2% of Alberta's cropland with 512,091 acres.

D.2. Growing Conditions

Black chernozemic soil covers most of the county.⁴⁶ This soil is described as a very black topsoil, rich in organic matter, typical of cool to temperate semiarid regions. Most of the county is plant hardiness Zone 3b, although southern portions of the county are Zone 4a. The province is an ideal place to grow crops like barley, canola and pulses because it has an ideal mix of warm days and cool nights.

D.3. Irrigation

The Western Irrigation District (WID) provides access to a dependable commercial and residential water source. Lands in the east central and south east regions of the county have access to this irrigation infrastructure.

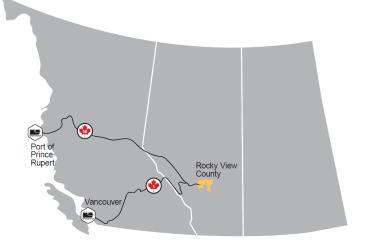
D.4. Market Access

Rocky View County borders the Calgary Metro Region – a market of 1.5 million. Half the population in downtown Calgary is part of the millennial generation, the highest in the country. Downtown Calgary is one of the downtowns that saw the fastest population growth between 2016 and 2021.⁴⁷

Rocky View County is with a day's drive of a market of over 18 million people, and 50+ million people within 24 hours.

The County is a one-day drive from the Ports of Vancouver (Canada's largest port) and Prince Rupert (Canada's deepest natural port).

Figure 1: Rocky View County to Ports of Vancouver and Prince Rupert



 ⁴⁶ Agriculture and Agri-Food Canada. "Soil Group Map of Alberta." https://www1.agric.gov.ab.ca/soils/soils.nsf/soilgroupmap
 ⁴⁷ Statistics Canada. "Census in Brief: A generational portrait of Canada's aging population from the 2021 Census." Census of Population, 2021. Release date: April 27, 2022. Catalogue no. 96-200-X, ISSN 2021003.

Canada is the only G7 nation having comprehensive free trade agreements with all other G7 members, and having preferential access across the Americas, Europe and the Asia-Pacific region.⁴⁸ Canada has entered into a free trade agreement with ten other countries in the Asia-Pacific region with the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).⁴⁹ With the CPTPP and the elimination of tariffs and non-tariff barriers, Canadian exports are expected to increase and expand across a wide range of sectors, including agriculture (beef, pork and vegetable oils) and non-agriculture (forestry, industrial machinery, heavy equipment and services).

Firms operating in Alberta have preferred market access to 49 countries representing approximately 1.5 billion consumers with a combined GDP of \$49.3 trillion USD.

D.5. Strategic Connectivity

Rocky View County has great strategic connections via road, rail, and air.

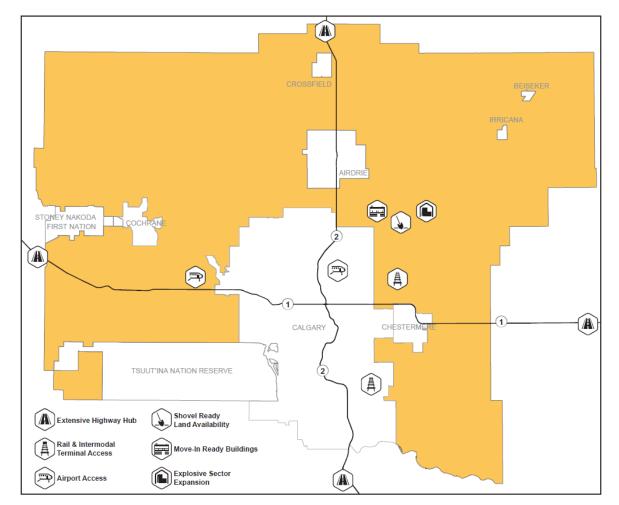


Figure 2: Map of Rocky View County's Strategic Connectivity

⁴⁸ Government of Canada. Office of the Chief Economist. Global Affairs Canada. "2022 Canada's State of Trade: The Benefits of Free Trade Agreements." ISSN 2562-8321

⁴⁹ https://agriculture.canada.ca/en/international-trade/market-intelligence/asia/cptpp/cptpp-benefits-canadian-beef-and-pork-exporters



Transportation and Logistics	
Highways:	 The County is at the epicentre of major east/west and north/south highway routes: Trans-Canada Highway which connects eastern and western Canada QE II, which forms part of the CANAMEX corridor which connects northern Canada with the US and Mexico
Class 1 Rail / Intermodal:	 Excellent access to two major intermodal operations: CPKC mainline and CPKC terminal access. CPKC is the first and only single-line rail network connecting a continent - Canada, the United States and Mexico. CN Rail via their CN Logistics Park provides direct rail access to two deep sea Pacific ports (Port of Vancouver and Port of Prince Rupert). Facilities handle:
International Airport:	Calgary International Airport (YYC) is a connecting hub for cargo services between North America, Asia, and Europe. YYC's four runways can handle some of the world's largest planes.
Inland Port:	Access to Calgary Region Inland Port which has Foreign Trade Zone status.

Table 9: Transportation and Logistics in Rocky View County

D.6. Warehouse and Distribution Connections

A high concentration of **food distribution warehouses** in Rocky View County and region provides producers with a direct local link to distribution channels, which in turn provides an efficient, and cost-competitive movement of goods.

Sample of Organizations in Rocky View County:

- Amazon
- Gordon Food Service
- Smucker Food Distribution Centre
- SYSCO (Calgary)

- Costco Distribution Centre (Airdrie)
- Loblaw Distribution Centre (Calgary)
- Sobeys Distribution
- Walmart Distribution

D.7. Industrial Land and Sites

CN Logistics Park:

- 80-acre park offers fully serviced, build-to-suit sites for warehousing and distribution, with direct rail connection.
- Canada's only intermodal business park.
- Significant drayage savings containers move direct from train to warehouse.
- Co-location within a CN intermodal yard eliminates one truck move.
- Access to all key logistics services in one place, like: rail, intermodal, warehousing and distribution.
- Easily accessed by North America's largest highways.
- Modern, state-of-the-art facilities with dedicated teams to handle cargo.

High Plains Industrial Park:

• Located immediately north of Calgary in Rocky View County, High Plains Industrial Park offers efficient highway access, an excellent labor force, and significant real estate tax savings compared to the city of Calgary.

D.8. Local Labour Force

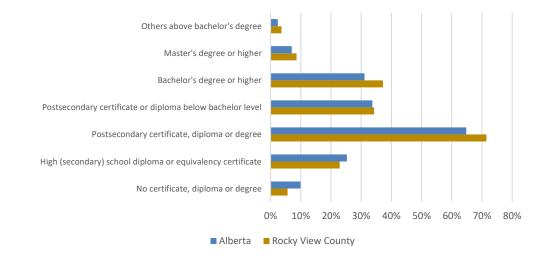
Rocky View County has access to a talented workforce. In addition to the County's population, there is a strong regional labour force with the cities of Airdrie, Calgary and Chestermere, and the towns of Cochrane, Crossfield, and Strathmore, and villages of Irricana and Beiseker. The workforce has the opportunity to live in either a more urban or rural setting and still work in a rural, agricultural setting.

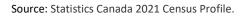
1,225 of Rocky View County residents (5.6%) are employed in the agriculture, forestry, fishing and hunting industry. 1,775 residents (8.0%) have occupations in natural resources, agriculture and related production occupations.⁵⁰

Rocky View County residents are well educated as demonstrated in Figure 3.



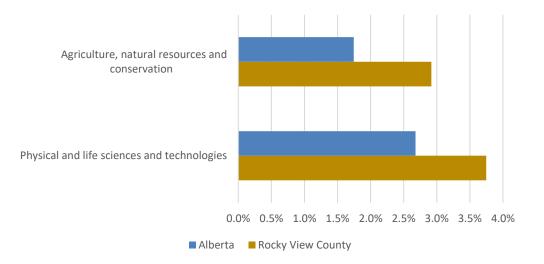
Figure 3: Highest certificate, diploma or degree for the population aged 25 to 64 years⁵¹





Of those residents with a post-secondary education, a stronger proportion in Rocky View County, compared to Alberta have agriculture, natural resources and conservation, along with physical and life sciences and technologies as their major fields of study.







D.9. Vicinity to Post-Secondary Institutions

There are many reputable agriculture, food and nutritional science programs in nearby institutions that help to create a skilled workforce with relevant knowledge and training in agriculture including:

- University of Alberta
- University of Calgary
- University of Lethbridge
- Olds College of Agriculture & Technology
- Lethbridge College

- Lakeland College
- Medicine Hat College and its Brooks Campus
- Red Deer Polytech
- Northwest Polytech

The University of Calgary recently created the *Simpson Centre for Food and Agricultural Policy*, an academic policy institute that supports Canadian agri-food and agriculture. Their aim is to apply transdisciplinary research to drive better policymaking and decision-making for a more sustainable, inclusive, and resilient agricultural industry.

The University of Calgary's **W.A. Ranches**, an actual working ranch, is located in Rocky View County. W.A. Ranches is used for teaching and learning, research, and community engagement purposes.

Students and faculty across different disciplines and from around the world can benefit directly with access to this working ranch. The study of cattle in the complex, real-farm context will enable research that can improve management practices for ranchers as well as academic programming that produces better veterinarians with more hands-on experience.

D.10. Technology and Sustainability

Agriculture in Canada is among the most sophisticated and technologically advanced in the world. Farmers use scientific crop and soil analysis as well as state-of-the-art equipment. Alberta reported the third highest use of automated guidance systems (auto-steer) in 2020. Nearly one-third (31.1%) of farms in Alberta reported using auto-steer equipment compared to the national average of 26.8%. Over a third of these farms were oilseed and grain farms.⁵²

Alberta reported the third highest rate of use for drones at 4.2% in 2020 compared. The national average is 3.6%.⁵³

In Rocky View County, 326 farms reported use of automated guidance steering systems (auto-steer) – about 2.5% of the province's reported farms.⁵⁴

The Calgary region has a one of the highest concentrations of high-tech workers among Canadian cities and boasts a burgeoning tech ecosystem. It is estimated that there are 123 Food and Agriculture Tech startups in Calgary.⁵⁵

53 Ibid.

⁵² St. Pierre, Michelle, and Mike McComb. "Alberta has the highest farm operating revenues in Canada." Statistics Canada. Release date: June 15, 2022. Correction date: February 3, 2023. Catalogue no. 96-325-X.

⁵⁴ 2021 Census of Agriculture.

D.11. Rocky View County's Agricultural Services Board

The mission of Rocky View County's Agricultural Service Board (ASB) is to act as an advisory body to Council on agricultural matters affecting residents, while promoting and developing agricultural policies to meet the needs of the municipality.⁵⁶

ASB programming works to:

- manage agricultural weeds and pests.
- conserve soil and water.
- enhance and protect viable and sustainable agricultural practices.
- control of animal diseases.
- develop municipal policies.

ASBs are key to Alberta's robust pest surveillance network that helps Albertans maintain market access by mitigating the risk of agricultural pest threats. This in turn enables the industry to provide assurance to trading partners and continue to produce high value crops and livestock.

D.12. How Rocky View County Can Assist

Rocky View County offers a full suite of support to all potential development partners who may have an interest in acquiring and developing land in the County. Our team of experts from Planning & Development, Engineering, Permitting and Economic Development provide a tailored approach to working with investors assisting them through the entire development process.

E. Rocky View County Opportunities

Adding value to its commodities is one of the greatest opportunities for Rocky View County's producers.

E.1. Local food / Farm direct marketing

There is an opportunity for the agriculture community to capture some potential from the growth in the distribution of locally grown foods and specialty crops. These opportunities are often best suited to smaller footprint operations. Rocky View County is strategically located to capture some of the growing market potential in the local food sector with a significant affluent population in the area, and major transportation thoroughfares. Additionally, consumers are increasingly interested in culinary experiences that incorporate local foods.

Farm direct marketing includes farm gate sales, farmer markets, u-picks, gift baskets and mail order, e-commerce.

Rocky View County examples include: Crystal Rill Trout, Pleasant View U Pick Berries, TK Ranch Natural Meats, Winters Turkey, Your Local Ranch

A **Made in Alberta** voluntary labeling program helps consumers easily identify Alberta-made products. Alberta producers and processors can use the new label on their locally-made products.

Analysis of Agriculture Sector:

⁵⁶ <u>https://www.rockyview.ca/agricultural-service-board</u>

The label will help shoppers quickly identify food products made in the province when choosing an item at their local farmers' market or grocery store.

Alberta Open Farms Days is a collaborative, province-wide, two-day event every August that gives Albertans an opportunity to experience the farm and understand where their food comes from. It is a backstage pass to meet the farmer, experience Ag-tourism in Alberta and taste local foods direct from the producer.

E.2. Ag Tech

Agriculture is increasingly dependent on technology and the acceleration of the rate of industry adoption of ag tech is likely to continue over the coming years.

Alberta is among the national leaders in use of auto-steer and drone technology.57

The Calgary region is a hotbed for ag tech opportunities, and the County serves as a direct access to a strong and historical agricultural base.

E.3. Organics

The organic market in Canada was worth approximately \$6.5 billion in 2021 compared to \$5.4 billion in 2017. Globally, Canada accounts for approximately 4% of annual organic trade revenues. The organic market is growing in Canada and the country has a lot of potential to increase its share of the global organic food market.⁵⁸

Demand for organic produce in Canada is growing. In the past four years, the growth rate has been over 8% annually, and in 2020, the sales of organic produce were around \$7 billion. At present, there is not enough domestic supply. Many Canadian processors of organic food are having to rely on imports and face difficulties in finding consistent and reliable Canadian ingredient producers.⁵⁹

In 2019, Canada exported \$461 million worth of tracked organic goods. Exports to the United States represented around 18% of organic food exports from Canada.⁶⁰

Canada imported \$789 million worth of tracked organic food products. Almost half (45%) of the imports were horticultural products from the United States. Organic foods imported from the United States include strawberries, spinach, lettuce, and carrots.⁶¹

 ⁵⁷ St. Pierre, Michelle, and Mike McComb. "Alberta has the highest farm operating revenues in Canada." Statistics Canada.
 Release date: June 15, 2022. Correction date: February 3, 2023. Catalogue no. 96-325-X.
 ⁵⁸ https://madeinca.ca/organic-food-statistics-

canada/#:~:text=The%20demand%20for%20organic%20produce,is%20not%20enough%20domestic%20supply 59 lbid.

⁶⁰ Ibid.

⁶¹ Ibid.



Provincially, the largest organic market is in Ontario, while British Columbia has the highest per capita organic sales. Albertans are the most likely to buy organic produce with 74% of the province's population buying organic products every week.⁶²

E.4. Snack foods

Snack foods have been one of the fastest growing value-added product categories in the domestic market in recent years. Snack foods continue to evolve both as between-meal snacks, as part of main meals and as meal replacements. Snack foods are well-positioned as value-added products with potential to address the above noted changing consumer needs and wants.⁶³

E.5. Beverage processing

Alberta is experiencing a boom in craft beverages with breweries, distilleries, wineries, and cideries opening up across the province. These processors are utilizing Alberta's locally produced agriculture inputs.

Alberta beverage exports totaled \$92.4 million in 2022. Whiskey is the largest export in this sector at \$71.7 million.⁶⁴

In terms of liquor manufacturing in Alberta, Alberta Gaming, Liquor and Cannabis (AGLC) is one of the most accommodating and supporting regulatory bodies in Canada. They have an open liquor market or open border system which allows for lots of selection including some of the best products in the world.





⁶² Ibid.

⁶³ Government of Alberta. "Consumer Corner: Consumer demand for value-added food products: snack food." Issue 59. November 2020.

https://open.alberta.ca/dataset/b5d936eb-2127-424e-b1b8-818c486d12aa/resource/d649460b-078d-42b6-9456-4e916ddd0d97/download/af-consumer-corner-59-consumer-demand-for-value-added-food-snack-food-2020-11.pdf ⁶⁴ https://www.alberta.ca/agricultural-trade-services-for-international-buyers



F. Alberta Strategic Advantages

F.1. Labour

Alberta's agricultural and agri-food sector employs over 69,800 Albertans. More than 21,000 Albertans hold degrees in agriculture operations and related sciences. Post-secondary institutions across the province offer innovative agriculture and agribusiness-related programs.

F.2. Incentives and Support

Alberta's new **Agri-processing Investment Tax Credit** program offers a 12 per cent non-refundable tax credit based on eligible capital expenditures to corporations investing \$10 million or more to build or expand agri-processing facilities in the province.⁶⁵

The Sustainable Canadian Agricultural Partnership (**Sustainable CAP**) is a new \$3.5-billion, 5-year agreement (April 1, 2023 to March 31, 2028), between the federal, provincial and territorial governments to strengthen the competitiveness, innovation, and resiliency of the agriculture, agri-food and agri-based products sector. The agreement includes \$1 billion in federal programs and activities and \$2.5 billion in cost-shared programs and activities funded by federal, provincial and territorial governments.⁶⁶

Alberta has over 22 research and innovation facilities specializing in crop and cereals, poultry and swine research, agronomy, biomaterials and food safety. Public/industry approaches like the Results Driven Agriculture Research (RDAR) are funding research to benefit farmers, ranchers and consumers.

Support organizations include various producer associations e.g. Alberta Lamb Producers, Alberta Egg Producers and more. The Ostrich Association of Alberta is based in Rocky View County.

Other industry support organizations include:

- Canadian Agri-Food Automation and Intelligence Network (CAAIN) Their mission is to create technological solutions for the most challenging problems facing Canada's agri-food sector. It is supported primarily through funding from Innovation, Science and Economic Development Canada (ISED)'s Strategic Innovation Fund (SIF).
- Canadian Food Innovation Network champions innovation and collaboration across Canada's food sector. It provides free membership to: manufacturers, processors, operators, distributors, retailers, foodservice, tech companies, service providers, and funders.

⁶⁵ https://www.alberta.ca/alberta-agri-processing-investment-tax-credit

⁶⁶ https://www.alberta.ca/sustainable-cap

F.3. Startup Ecosystem

Alberta, and in particular the Calgary region, has a growing startup ecosystem. Calgary. Calgary's startup ecosystem moved up a bracket in Startup Genome's Top 100 Emerging Ecosystems list and now places among the top 60 ecosystems globally. There are a number of ecosystem supports particularly related to agtech and agri-foods:

Table 10: Ecosystem Supports for Agtech and Agri-foods

Ecosystem supports for agtech and agri-foods:		
District Ventures Capital	is a venture capital fund investing in innovative companies in the food & beverage and health & wellness sectors. It is based in Calgary. The fund is led by entrepreneurs, including Managing Partner, Arlene Dickinson. Dickinson is preparing to launch Venturepark which will house her network of companies with a focus on supporting brands in the food and health Consumer Packaged Goods (CPG) space.	
SVG Ventures – Thrive	a global agri-food venture capital firm, set up its Canadian headquarters in Calgary in 2021. Along with funding from the Opportunity Calgary Investment Fund (OCIF), Thrive Canada will mentor Canadian agri-food startups. Calgary was chosen, in part because of the strong talent pipeline for entrepreneurs and because southern Alberta is a place with a strong agriculture base.	
Zone Startups Calgary	United Farmers of Alberta (UFA) and Zone Startups Calgary , an accelerator for pilot-ready tech startups, announced a partnership to collaborate and support early-stage agriculture technology companies with technical and commercial validation through their program offerings.	
Carrot Ventures / AVAC Group	Calgary venture capital firm AVAC Group announced the launch of a new \$15 million venture capital fund called Carrot Ventures . The fund will focus on investing in Canadian agricultural technology startups.	
The51 Food and AgTech Fund	makes early-stage investments in four sectors across the agricultural value chain: Agriculture Biotechnology, Automation, Farm Innovation, and Food Innovation.	
CDL-Rockies' Ag stream	the Creative Destruction Lab or CDL-Rockies' Ag stream is based in Calgary and leverages the region's vast pool of expertise in agricultural innovation to help founders rapidly scale and commercialize their science- or technology- based startup.	

F.4. Alberta's Agriculture

Alberta's abundance of arable land and sunshine enables the province to effectively grow crops and raise cattle. Alberta offers a **high-quality supply of primary products** and is the third largest exporter of agri-food products in Canada.⁶⁷

- Alberta beef is known for its superior flavour, texture and quality.
- Alberta's grain fed pork is famous for its tenderness and firm white fat leading to a better flavour and texture experience.
- Barley grown in Alberta is recognized internationally for its superior product qualities.

Alberta is an experienced exporter of genetics of various species of livestock. These genetics include semen, embryos and breeding stock. The province also provides a range of technical and consulting services, like genetic selection, nutrition and health, animal care and management, and biosecurity.

Alberta's natural gas infrastructure provides affordable heat and power to rural farms and greenhouses.

In 2022:

- Alberta exports of agricultural and food products were valued at a record \$16.2 billion, up 14.6% from 2021.⁶⁸
- Alberta produced 33% of Canadian wheat, 30% of canola, 54% of the nation's barley, and 32% of Canada's pulses.⁶⁹ It is the nation's top grower of barley, and grew the second highest number of acres in canola and spring wheat.
- The top 5 international markets for Alberta's agri-food exports were the United States (\$7.3 billion), China (\$2.6 billion), Japan (\$1.7 billion), Mexico (\$867.9 million) and South Korea (\$420.9 million). These accounted for 80.2% of the total.⁷⁰
- Alberta's top 5 products in 2022 accounted for 65.9% of the total. These were beef (\$3.6 billion), wheat (\$3.1 billion), canola seed (\$1.9 billion), oilseed cake and meal (\$1.1 billion) and crude canola oil (\$963.3 million).⁷¹
- Alberta led the nation in cattle and calf inventory, accounting for more than 42% of Canada's total. As Canada's leading beef-producing province, Alberta is also a significant exporter of beef and live cattle.

Other facts about Alberta's agriculture and agri-food production:

In 2021, farms in Alberta reported 25.6 million acres of hay and field crops – 27.6% of the country's hay and field crop area.⁷²

⁶⁷ <u>https://investalberta.ca/agriculture/</u>

⁶⁸ <u>https://www.alberta.ca/agricultural-trade-services-for-international-buyers</u>

⁶⁹ <u>https://investalberta.ca/agriculture/</u>

⁷⁰ <u>https://www.alberta.ca/agricultural-trade-services-for-exporters</u>

⁷¹ Ibid.

⁷² 2021 Census of Agriculture.



- Alberta has the largest irrigated area in Canada with nearly 680,000 hectares of irrigated land.⁷³ An \$815 million investment will modernize irrigation infrastructure and increase water storage capacity.⁷⁴
- Alberta reported the fourth highest inventories of pigs and chickens.
- In 2020, farms in Alberta reported \$22.2 billion in farm operating revenues. This was more than any other province and accounted for 25.5% of Canada's total farm revenues.⁷⁵
- The province has developed an **Agri-food Investment and Growth Strategy** to amplify Alberta's first-class reputation for high-quality agricultural products and increase capacity to help meet the global demand. This integrated 3-pillar strategy includes:
 - Investing in value-added agricultural processing capacity.
 - Increasing agri-food exports.
 - Expanding irrigation.

G. Conclusion

Producers in Rocky View County recognize that proximity to a strong metropolitan base, both for access to labour and for market access are key advantages their location. Additionally, access to good transportation infrastructure and linkages are beneficial.

Rocky View County is supportive of local producers by organizing annual food tours that bring promotion and attention to local operations. Their Agricultural Service Board (ASB) is an advisory body to Council regarding agricultural matters that affect residents, while promoting and developing agricultural polices to meet the needs of the municipality.

The County has a team of experts from Planning & Development, Engineering, Agricultural & Environmental Services, Permitting and Economic Development willing to provide a tailored approach to working with investors and assisting them through the entire development process.

For more information, contact:

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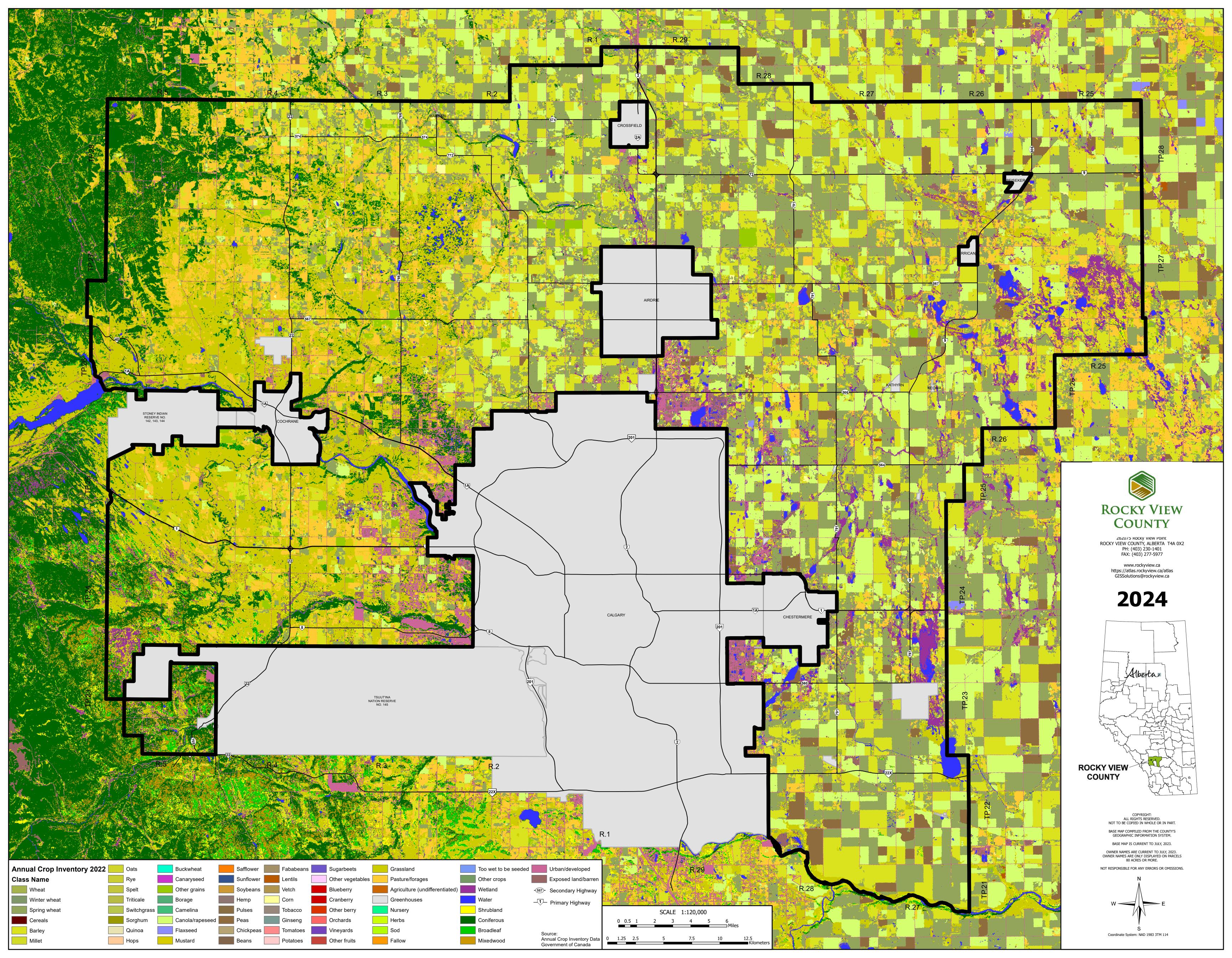
⁷³ https://www.alberta.ca/irrigation-strategy

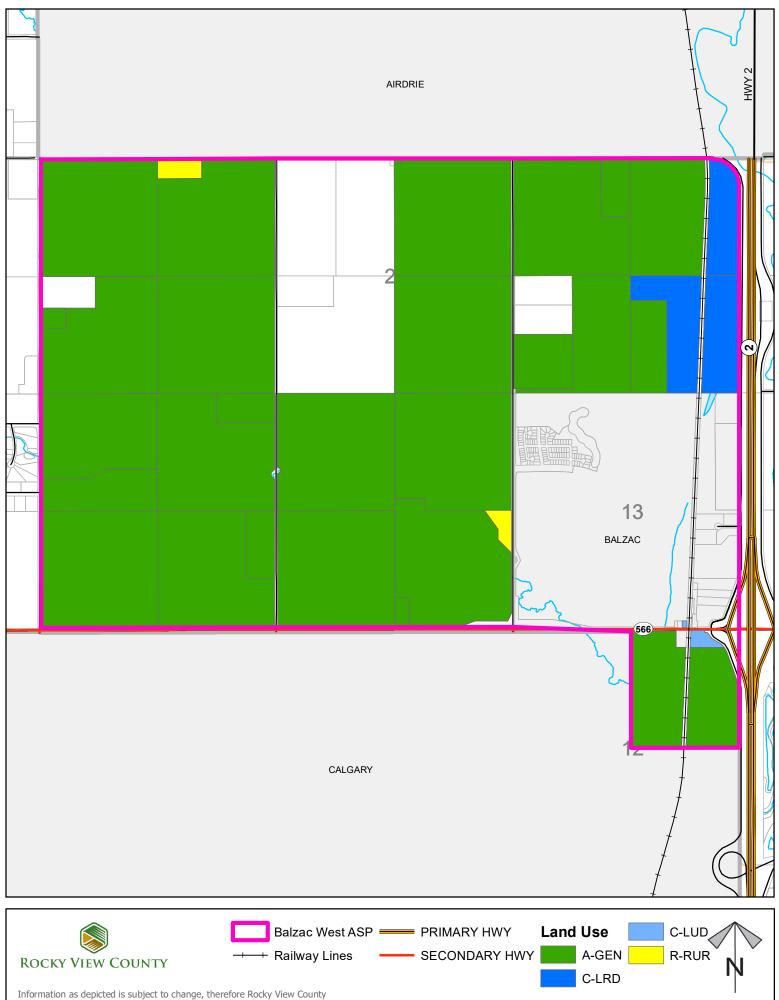
⁷⁴ <u>https://cib-bic.ca/en/medias/articles/investing-in-irrigation-farmers-and-jobs/</u>

⁷⁵ St. Pierre, Michelle, and Mike McComb. "Alberta has the highest farm operating revenues in Canada." Statistics Canada. Release date: June 15, 2022. Correction date: February 3, 2023. Catalogue no. 96-325-X.

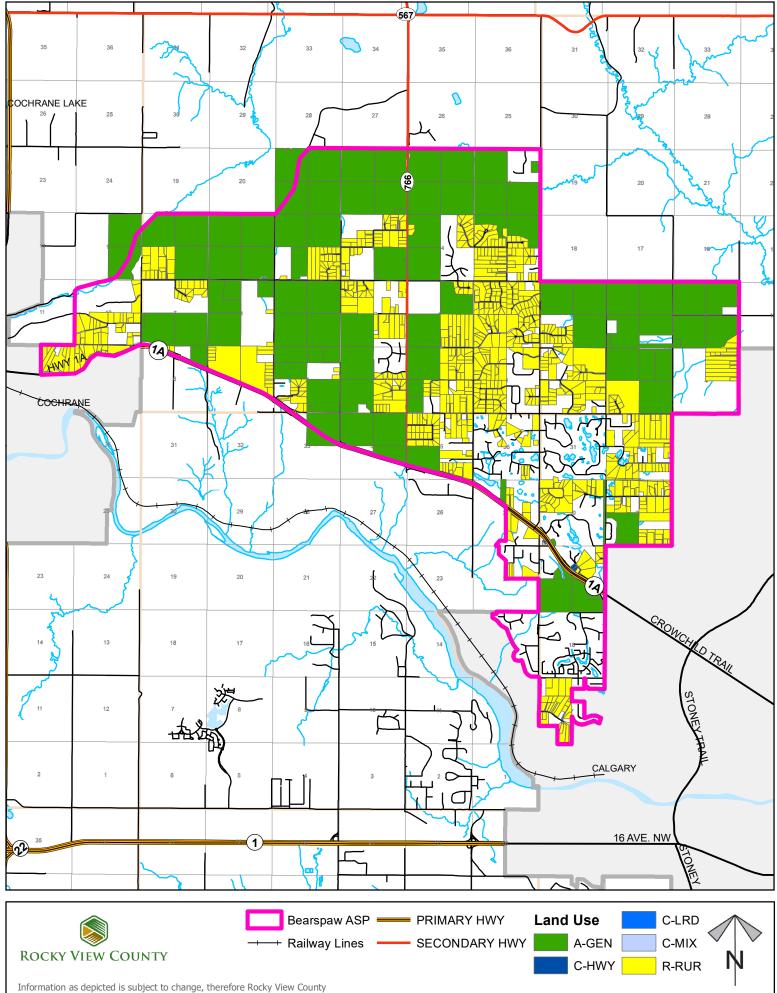


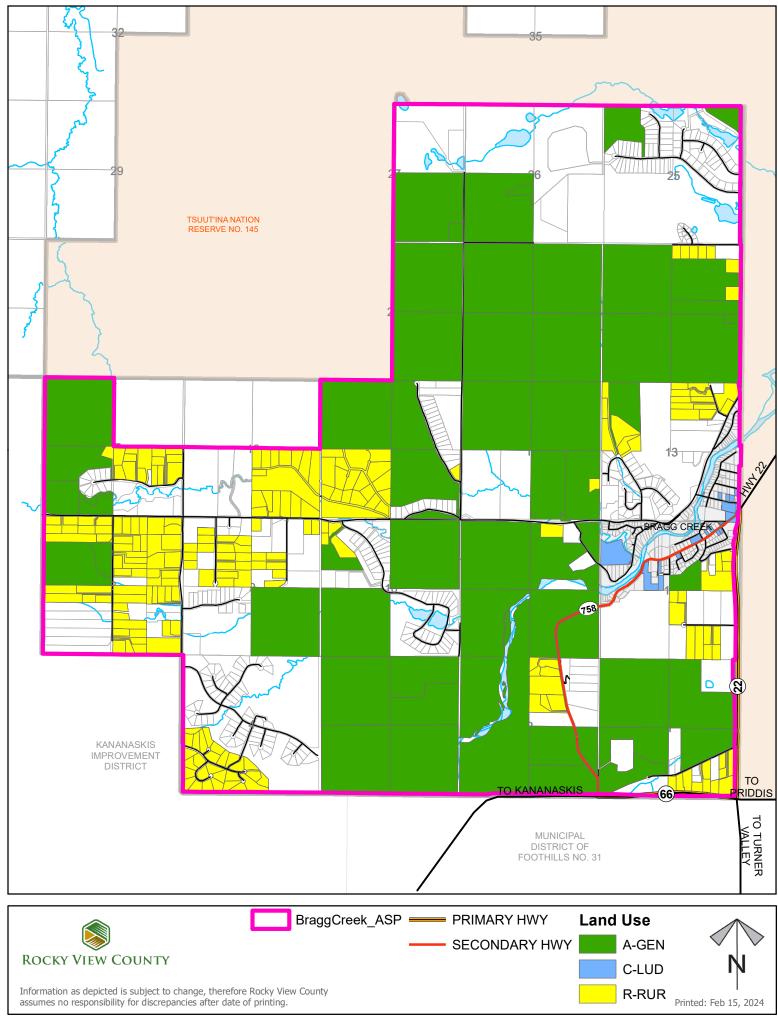
Appendix A: Rocky View County Maps

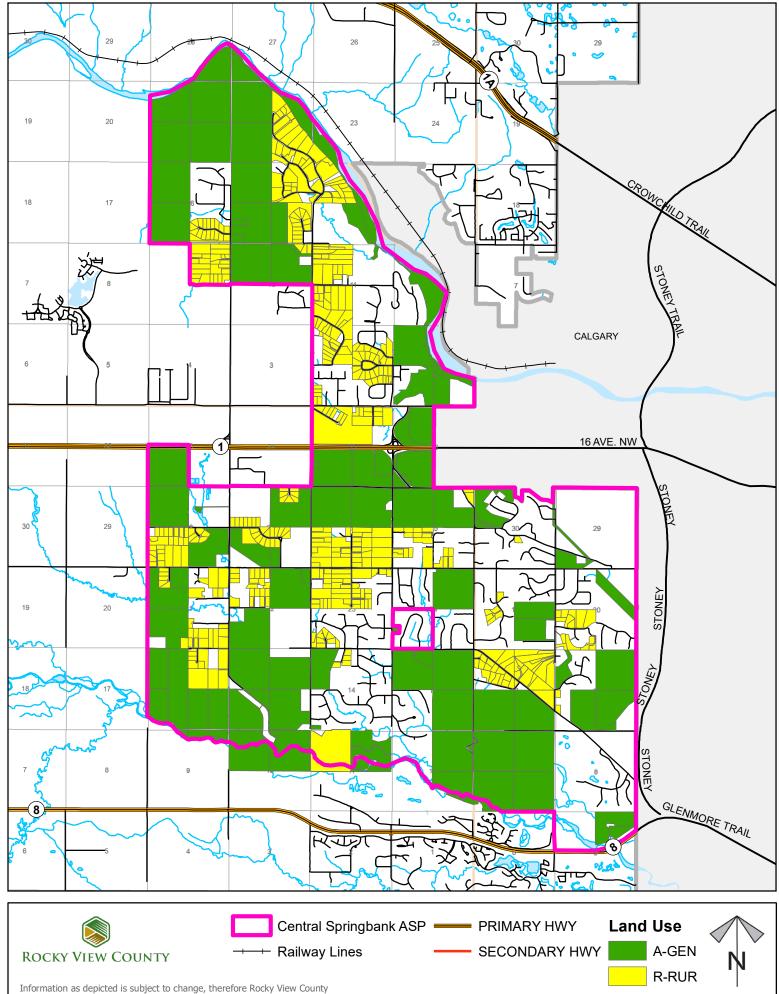




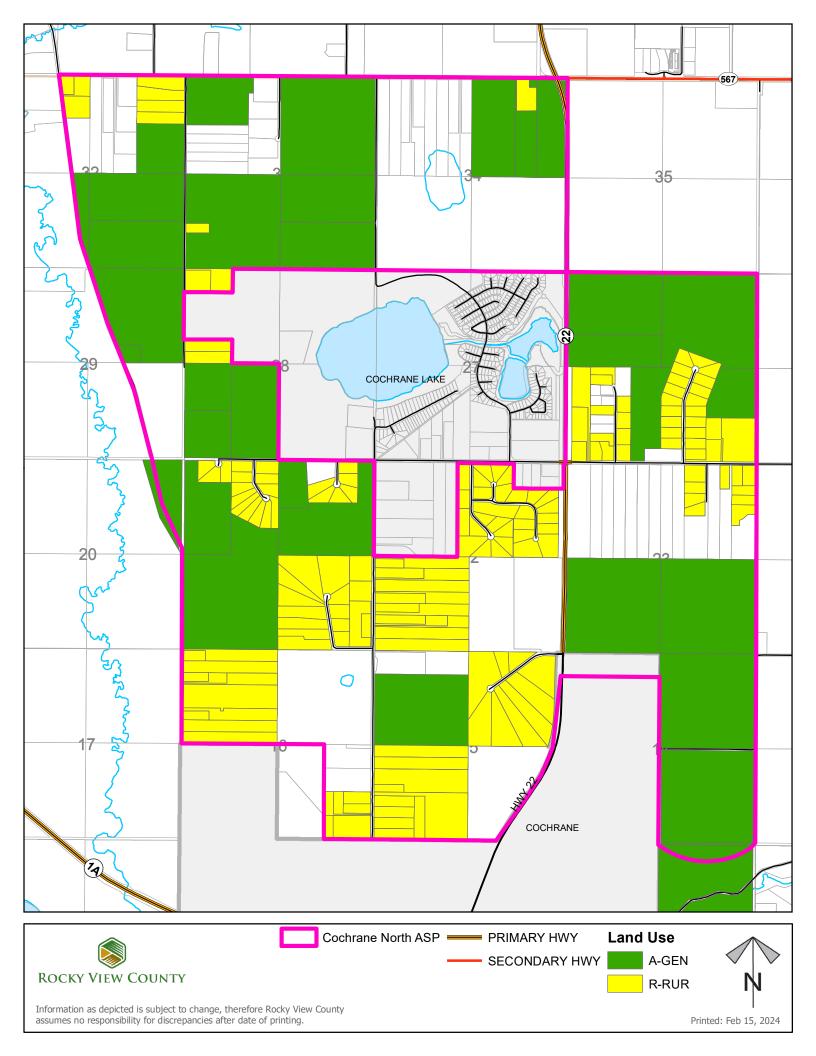
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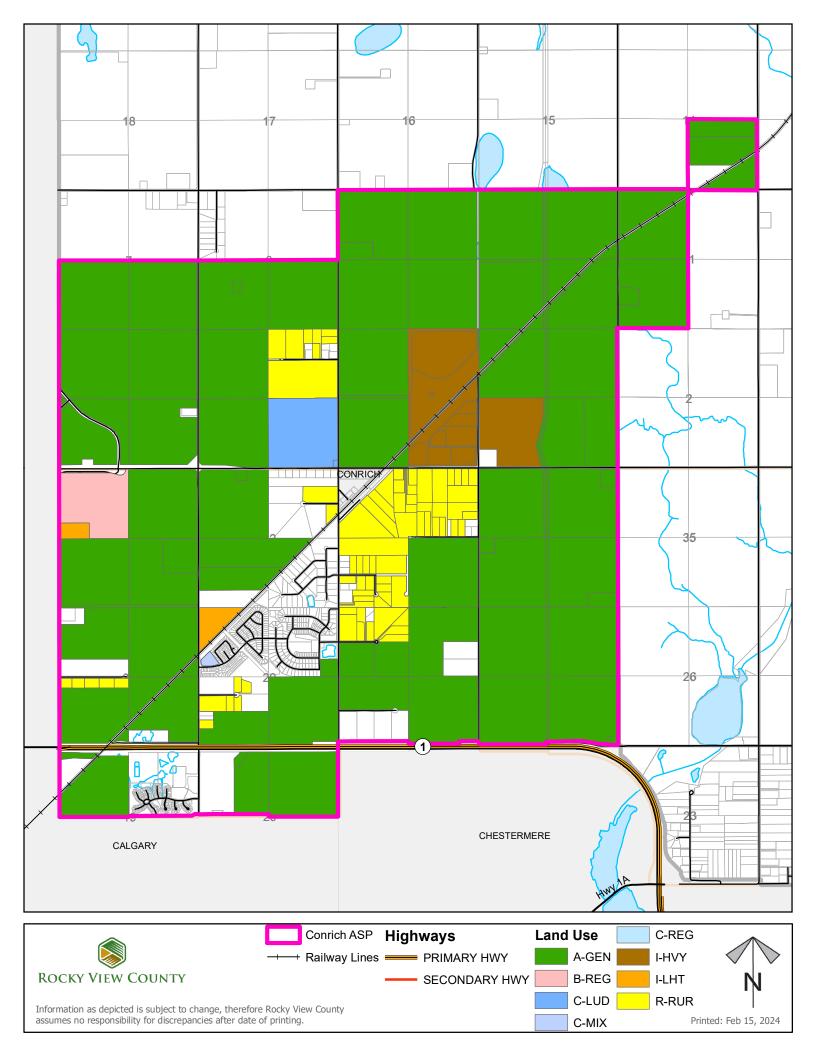


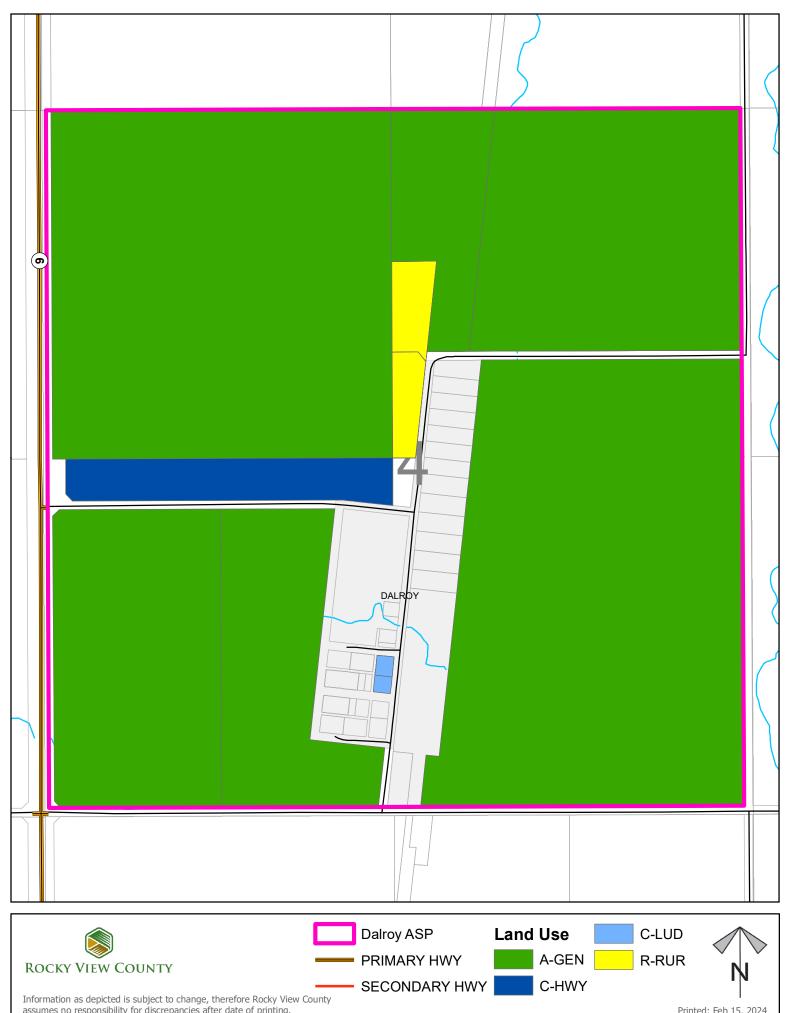




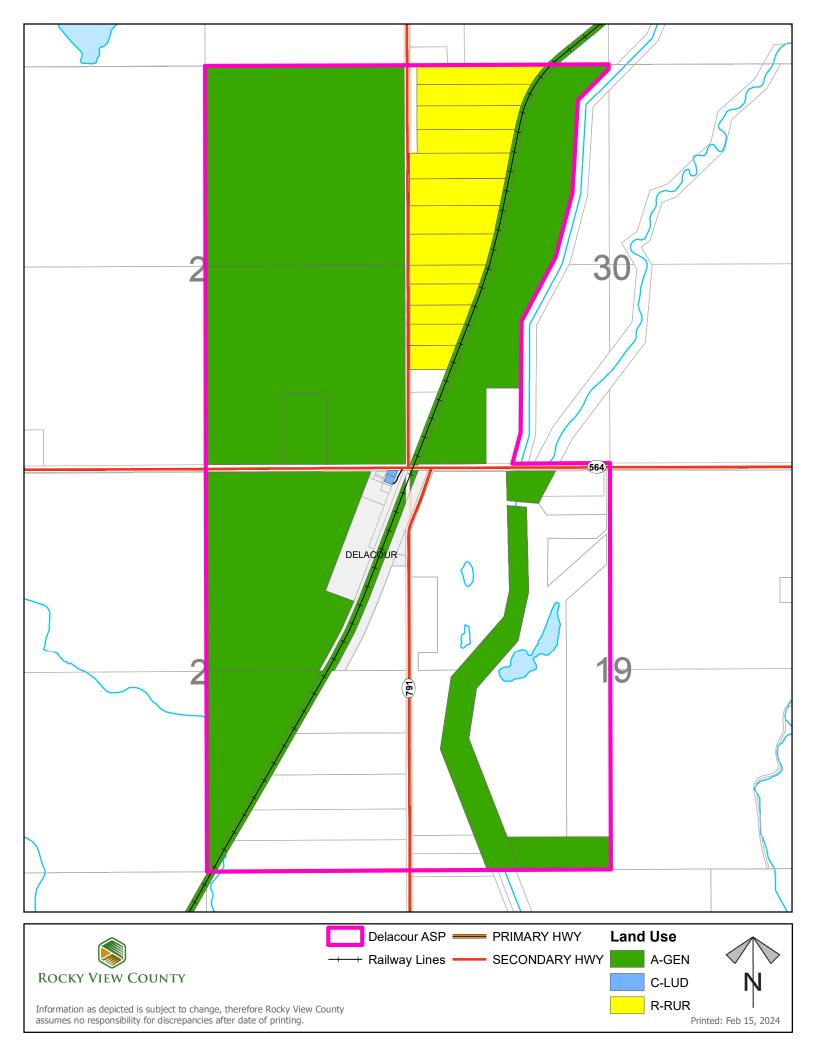
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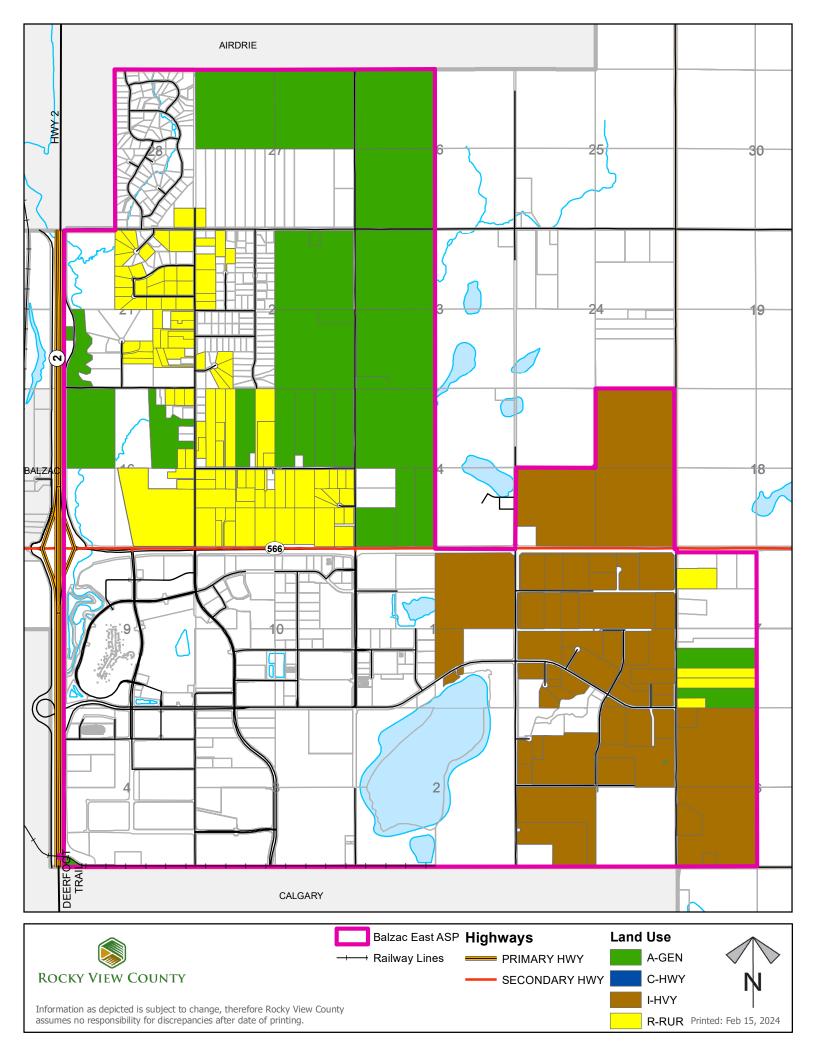


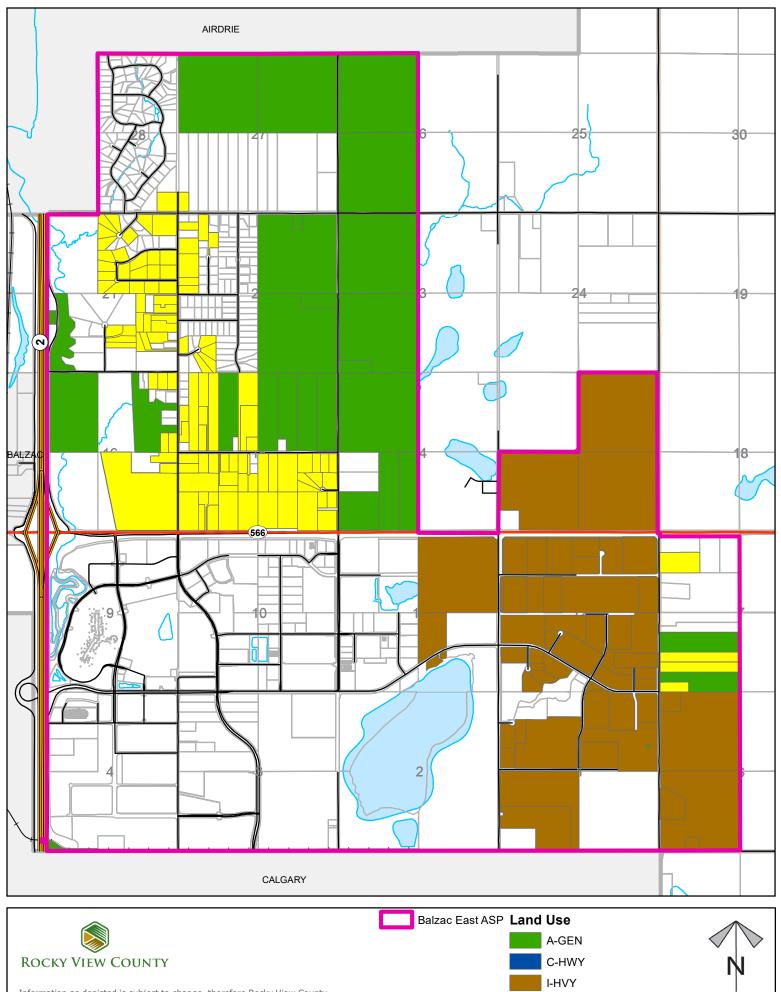




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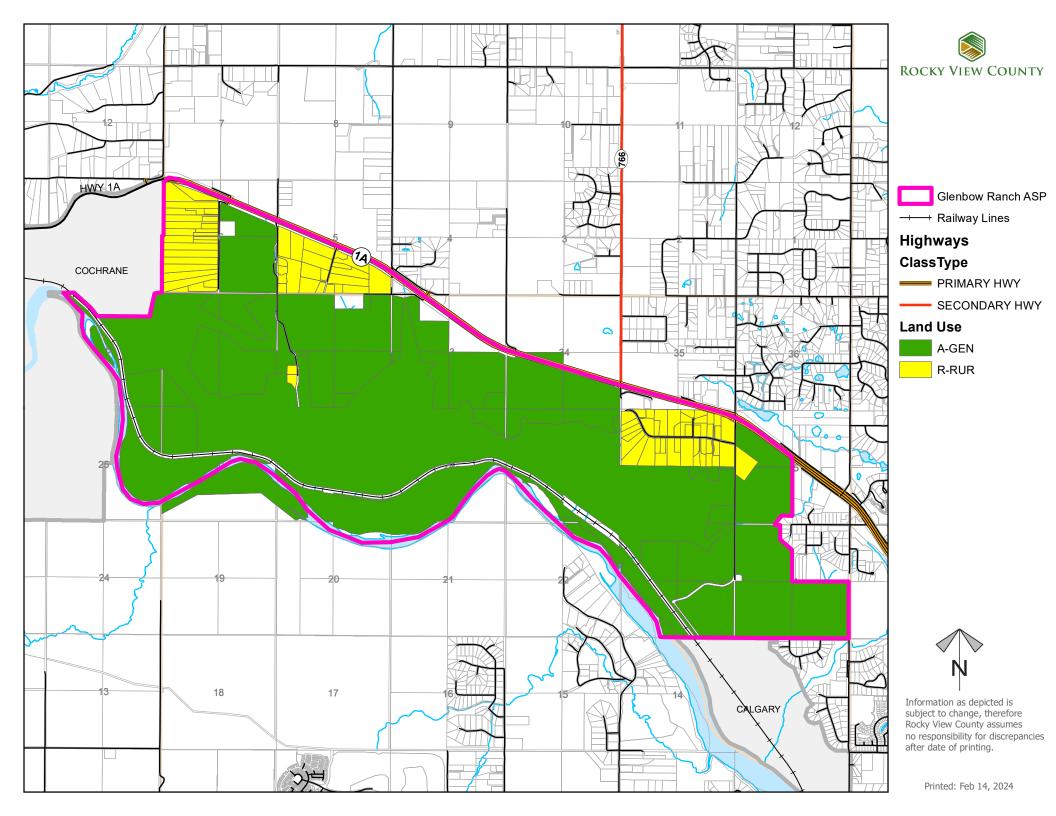


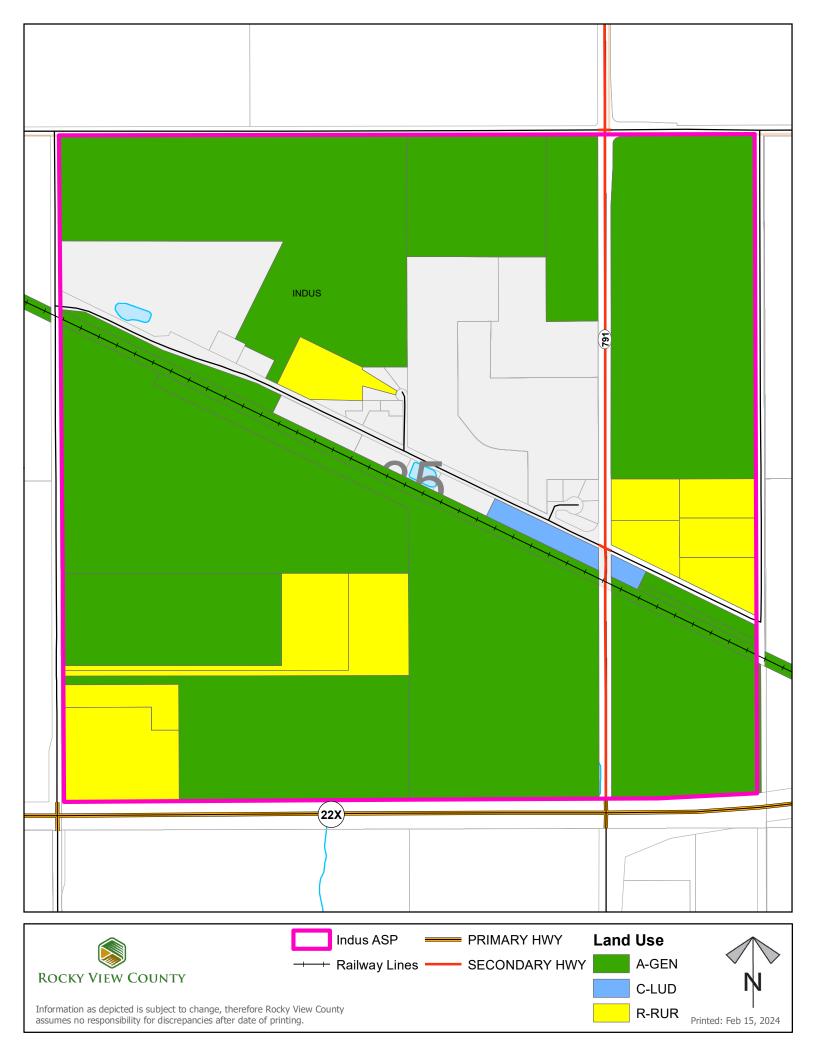


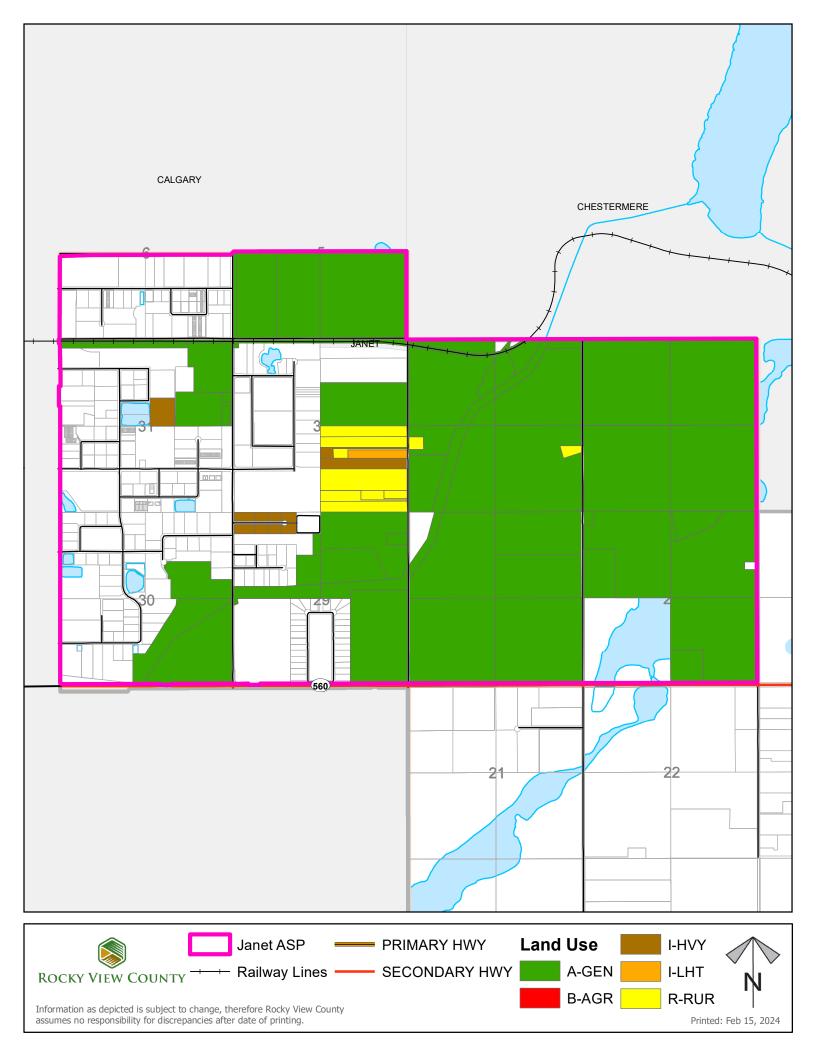
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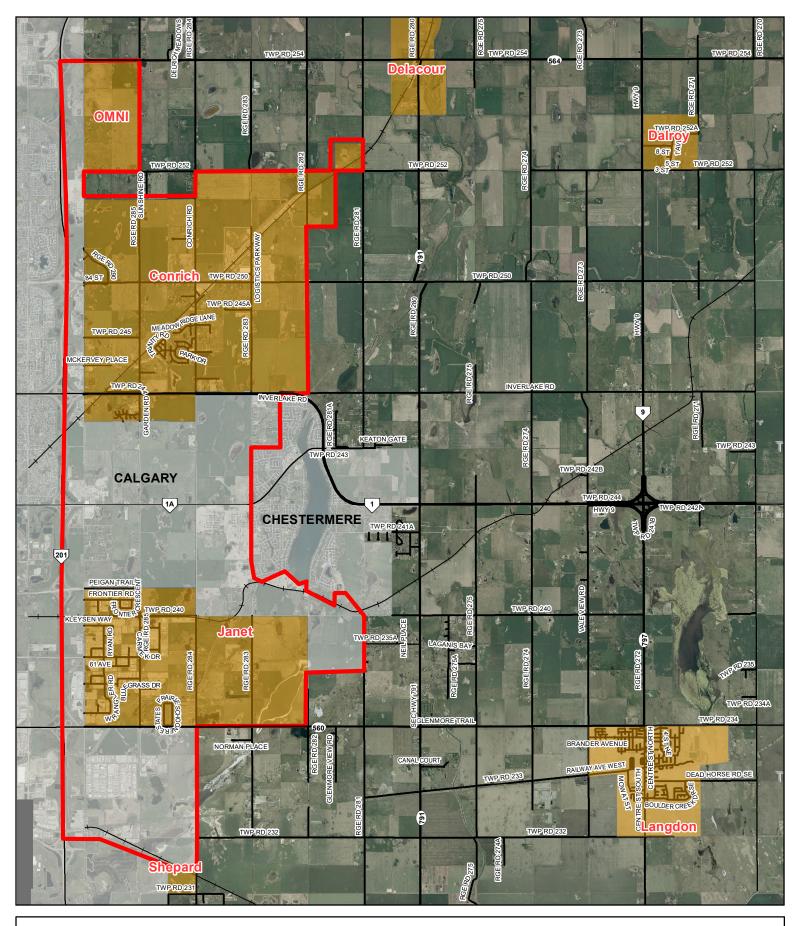
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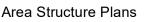






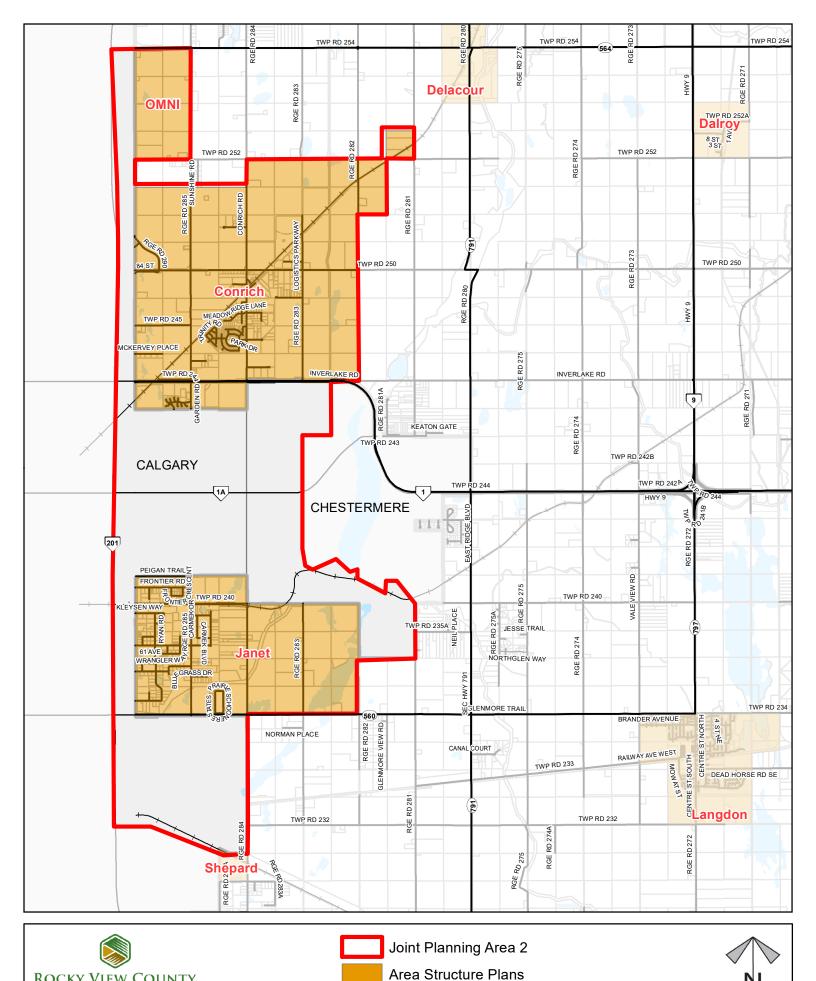


Joint Planning Area 2

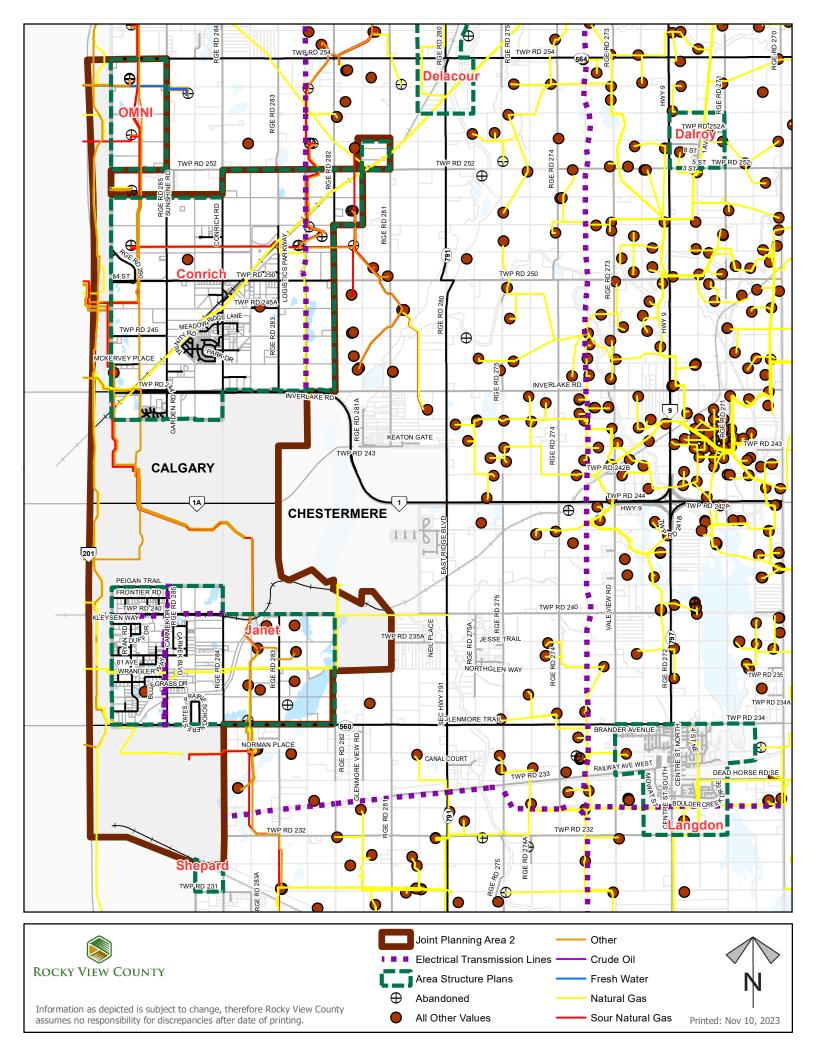


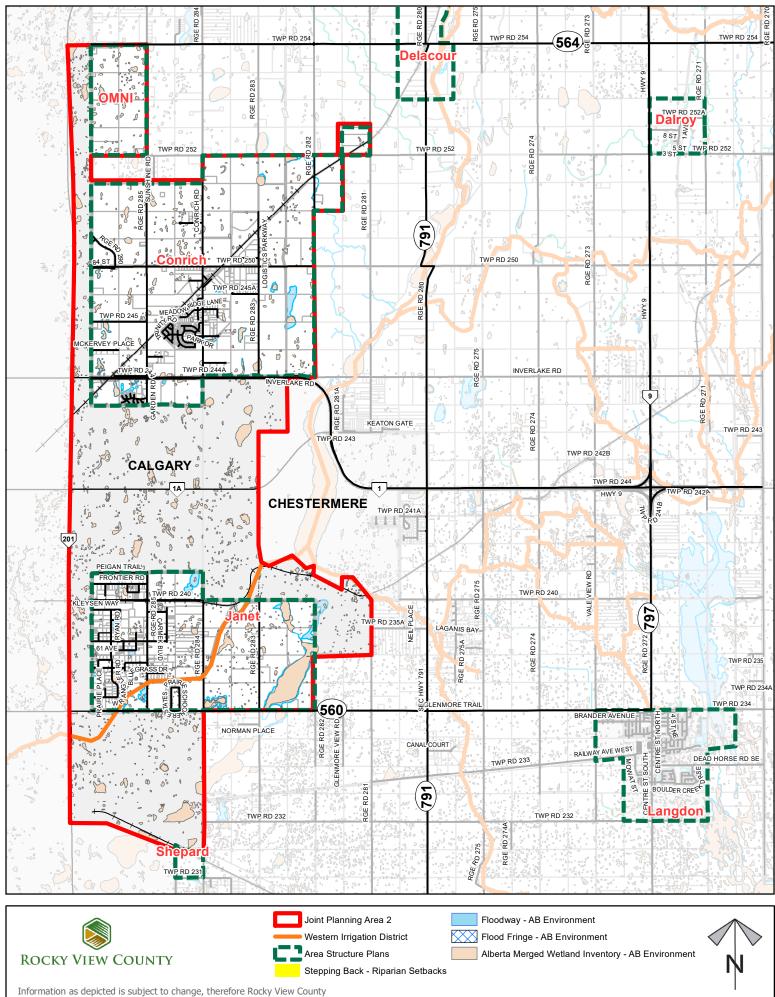


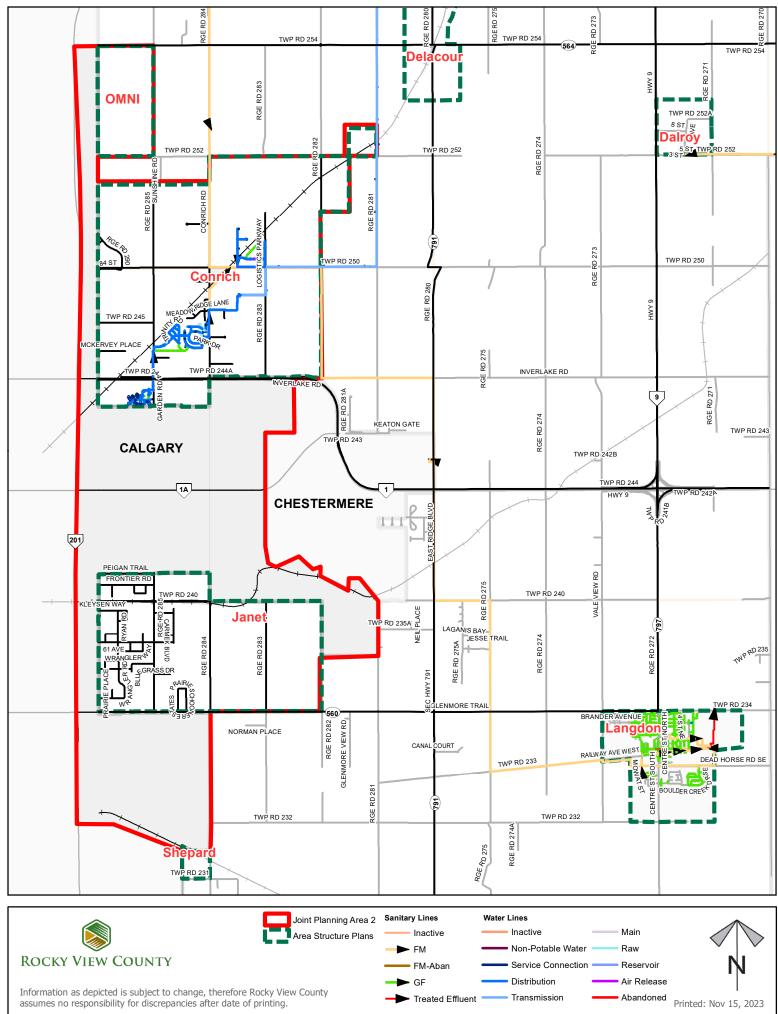
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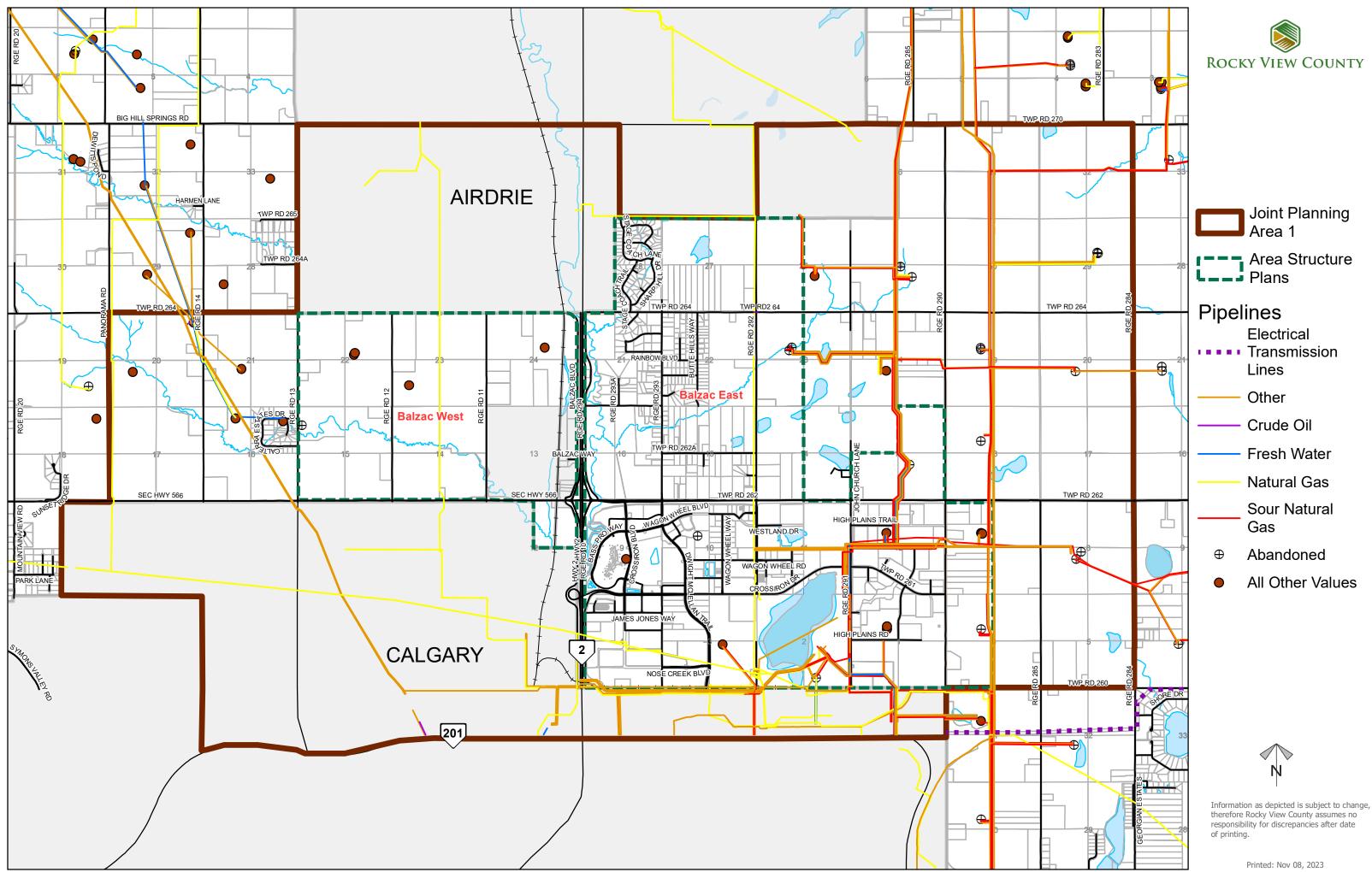


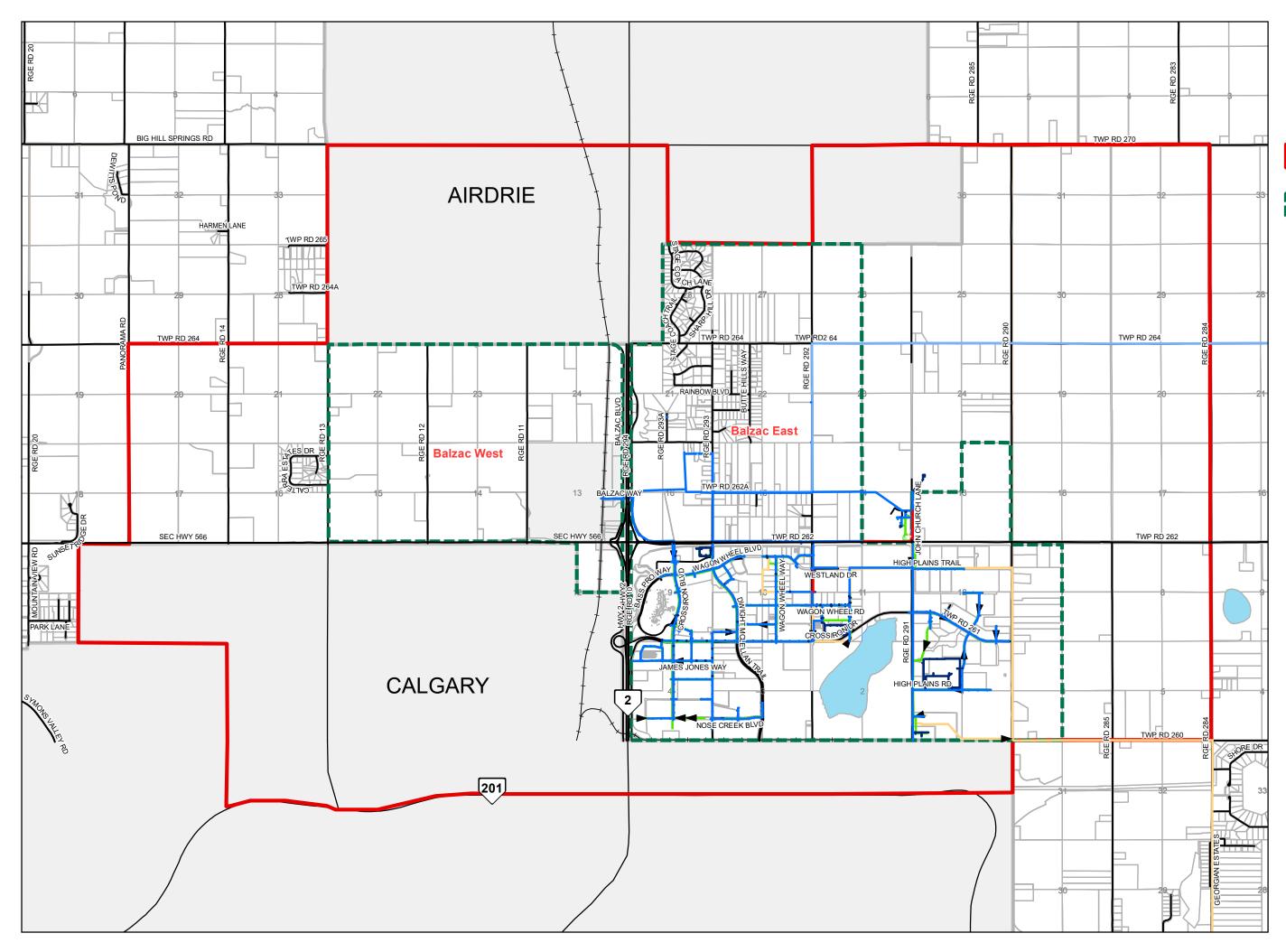
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- Joint Planning Area 1
- Area Structure Plans

Water Lines

- Inactive
- Non-Potable Water
- Service Connection
- Distribution
- ----- Transmission
- Main
- Raw
- ----- Reservoir
- Air Release
- ---- Abandoned

Sanitary Sewers

- ----- Inactive
- ► FM
- FM-Aban
- → GF
- Treated Effluent



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